

Gender, Stress, & Coping in the U.S. Military

Volume III

Performance

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INTRODUCTION

Military leaders have long recognized that mission readiness requires both the absence of disease and the presence of mental, physical, and spiritual health. However, little is presently known about the health of military women, particularly as it may be uniquely affected by trauma and war. Such knowledge is essential to meeting the health needs of military women for all mission contingencies. These missions include: peacekeeping and peacemaking activities (e.g., the Sinai MFO Treaty, Somalia); humanitarian aid (care of civilian refugees following the Persian Gulf War; natural and human-made disasters including assistance in Hurricane Andrew, the Los Angeles riots, threats of chemical terrorist attack, and the Oklahoma City bombing); and potential combat. As the number of active duty women increases (approximately 10% in 1995), women are assuming critical positions of responsibility which fully expose them to the hazards of combat and war.

The systematic study of the effects of trauma on women's health is important for women in all branches of service. There is a close interplay between performance, health and psychosocial factors in responding to trauma, disaster, and combat. Understanding the gender-specific responses associated with traumatic stress is important for the development of command policy, training scenarios, and medical care procedures. However, little is presently known about how the health of military women may be uniquely affected by trauma and war.

Available data on responses to various traumatic events can serve as an analog to aid in understanding some of the potential effects of war and combat on military women. The higher base rates of psychiatric illness in women, their greater social supports (although the relationship to unit cohesion in women is less clear), higher distress after exposure to death and the grotesque may be expected to alter responses to combat, deployment, and military contingencies compared to that in men. In addition, differences in fatigue, chronic stress tolerance, effects of sleep deprivation and variation of stress effects across the menstrual cycle can increase or decrease stress tolerance and health effects. Overall, empirical studies in this area is greatly needed.

This volume is the third in our series of publications deriving from discussions with national and international experts to increase our understanding of gender, stress, and coping in the US military. It contains edited transcripts of round-table discussions with scientists from a broad range of backgrounds on topics pertaining to performance. The presentations include observations and data from individuals with special expertise on the topic. They provide important insights into research hypotheses which have been explored already and inform readers on questions which should be examined in the future.

**Women in the Military
and Unit Cohesion**

David H. Marlowe, Ph.D.

We are pleased to have with us Dr. David Marlowe who is the Director of Military Psychiatry for the Walter Reed Army Institute of Research. He is a long-time friend and contributor to our department. We look forward to his thoughts on some of the issues of gender and health in the military.

DR. MARLOWE: I do hope that this will be in the form of a dialogue. There are a few things I would like to begin with which impact on the issues of women in the military, the health of women, the impact of the kinds of experiences that they have in the military, and the relationship to issues of cohesion in units. All too often, in my experience, we treat issues of women in the military as if they had some kind of fixed and material significance. We do not treat them as we properly should as aspects of an evolutionary pattern. The issues we see or talk about exist in the moment we tap into what is happening. I think we do this at our peril. I get very tired of hearing people present cookie cutter views of, "the problem of women in the military."

I discussed this topic with some of my friends in the Navy when they were beginning their studies of integration of women into deployed Navy units. I quietly pointed out that while this was a new problem for them, it was no longer a problem for the Army and hadn't been for years. The Army was deploying women as active parts of every group we put into the field for the better part of a generation. There was a great deal of concern in the Navy about the deployment of women. All one could say was, "Yes, you are going to have problems involved in the change. However, you will also discover that many of those problems will go away." We often treat the initial problems as if they are permanent parts of whatever it is we are trying to deal with.

I have looked at women and health and problems of women in the military at various times for the last 20 years. Women in the military have changed rather dramatically as have the problems involved in incorporation of women into units and cohesiveness of those units. Women's responses to what occurs have also changed.

We need to start out by recognizing that what we see are illusionary patterns which change over time. We also deal often with stereotypical allocations to women of things that have very little to do with women. In the next few minutes I will tell you some stories beginning in the 1970's. We were looking at women and health and the integration of women into units at Fort Meade which then was a combat arms military post with many support units.

We looked at women in this context right after the Women's Army Corps (WAC) was dissolved and women were moving in as functioning members of other units. You have to realize that prior to this, the women in the Women's Army Corps (WAVES and WAC's), worked in gender-integrated units, but lived in gender-segregated units and were under gender-segregated commands. Their unit was a WAC company where the women lived together in a single billet and their commanders were responsible only for them.

At that time, on one level, we saw some very successful things. We also saw a great many problems as women moved into integrated units. In some places, we saw a tremendous amount of sexual harassment. We saw a tremendous amount of specific gender-oriented behavior and we saw higher levels of psychological problems among women. The women were constantly targets of sexual attention. There was a lot of homosexuality, anger, and aggression. There were physical confrontations using knives. At that time, many women maintained that women could not be cohesive, that they don't bond, and that they were too ferociously competitive.

At the same time, we had a couple of people who were looking at health and health diaries who discovered that women were producing double the number of symptoms that men were. Then we found out something very interesting. While women were producing double the number of symptoms, they were losing less time from work and going on sick call less often.

What we saw when one looks at it with some perspective, was the turmoil of the new and of change. People were moving into an environment that had never been integrated before. If you look at the initial integration of blacks in the armed forces, many of the same things happened.

That was the first time I looked at women. We observed a real set of problems and a real set of attributions. Why did women think they didn't bond? One of the reasons they thought they didn't bond was that men told them this continuously. Their NCO's (non-commissioned officers) and others told them over and over again, "you guys just don't bond the way men do. You don't support each other." Indeed, when you look at some of the data our lay participant observers reported, there was a continuous set of social effects in which there were all kinds of pressures to split women apart from each other. We had two people living in billets for almost a year.

The other thing which is hard is distinguishing between the behavioral reality and attribution. In 1979, we were looking at basic training at a couple of training centers. Basic training had at this point been gender-integrated for about a year and a half. We just re-examined gender-integrated basic training. I have been terribly amused to hear people talking about the new problems of integrated basic training. We ran gender-integrated basic training for almost four years. It was studied by many people with a "fare thee well" attitude and no one seems to remember that.

PARTICIPANT: Why did it stop?

DR. MARLOWE: I will come to that. What did we see in gender-integrated basic training? We saw an extraordinarily ambivalent pattern. Basic training, for those of you who don't know it and don't understand it, probably represents what it would be like for women in combat. It is the high point for the creation of cohesion and bonding in the Army. It is an intense socialization experience which is rigorously designed by Training and Doctrine Command (TRADOC), by the training centers and by the drill sergeants to force people into massive interdependence and bonding with each other.

What we actually saw in the gender-integrated groups was a high degree of bonding and mutual support between men and women. There was a positive evaluation of women on one side but on the other, symbolic side (which was terribly important) we saw a total rejection of women in training.

The men in gender-integrated units felt that they were getting a second rate training in which the standards and aims had been lowered in order to accommodate the lesser physical capacities of women. It was very interesting how this feeling was expressed. It fed into a perpetual ambivalence and tension between men and women. It was expressed in almost every unit I remember at Fort Dix. The men would explain very carefully that they were getting really third rate basic training. There is a persistent myth in basic training that they are being prepared for combat. This is part of the culture of the training center. The reality is that they are not being prepared for combat at all. They are being prepared to acquire certain basic social and soldierly skills that will enable them to go on to the real training later. They are becoming physically conditioned, learning basic marksmanship, and learning some very basic tactics. Nobody expects them to be able to go out and kill anyone when this is over. Male soldiers in integrated units expressed to us that everybody else has BCT, Basic Combat Training, a term that had been dropped by the Army during the Vietnam War. They believed they were going through BT, Basic Training, which was the Army's actual term, instead of BCT.

They brought bayonet training back a few years ago, but all bayonet training had been dropped in 1967 as non-viable; it was a waste of time, not a skill. Nobody was getting bayonet training at Fort Dix at the time. However, everyone fully and completely believed that there were two separate training modalities, one for men and one for women. Everyone fully believed that there were two different sets of physical standards, one for mixed gender units and one for all male units. Every soldier believed this as an absolute creed. I interviewed several hundred and never got a different story. In fact, you got it on the other side when you talked to people who were in all-male training companies.

There also was another underlying issue that led to tension between men and women. This was, at the time, the question of, "what do you wear when you run?" Men were required to wear combat boots and women, for the most part, were put in running shoes. One of the basic reasons for the termination of gender-integrated basic training came from the orthopedists. It was presented as a basic health issue everywhere. A task force was set up at TRADOC. The issue coming in from the training centers was that there was an extraordinary level of stress fractures being suffered by female trainees. The decision made by the orthopedists was that this was caused by running in boots. They took women out of boots but they left men in boots; always a mistake. The Marines were much smarter about it. They were not really gender-integrated but everybody in Marine basic training runs in running shoes. They don't run in boots, they march in boots.

The next thing which the orthopedists brought up was a very simple issue. The average woman had much shorter legs than the average man. The source of the stress fractures was trying to keep up with men on roads. Women would have to run at a slower pace with shorter steps or they would keep getting those injuries. They were losing a lot of recruits because some people don't take shin splints seriously. They can be extraordinarily painful and very disabling.

That was really the main reason for the end of integrated basic training. Some of the other reasons had to do with the symbolic issues which became terribly important. I think the symbolic issues are just as important as the real issues to the evolution of women in the military and the way in which women are perceived and dealt with. Men were saying, "when I get out of here, I know I will never be as good a soldier as others because I have never been held to these standards. I have never experienced the kind of things that are going to make me a real warrior whereas everybody else is going to be a real warrior."

There are two things to remember. In terms of the issue of cohesion, men and women have no problem bonding with each other. The pattern (and it is something I will come back to in terms of relationships) was one that those of you know about who are familiar with coed dormitories and mixed gender bathrooms in colleges and universities. It is a pattern of the development of a very wide sexual and incest prohibition, if you will, within the unit.

Women in the unit and men in the unit created brother-sister relationships and considered each other sexually off limits. If there was to be sexual behavior, it was with people on the outside. A woman in another unit could be approached. A woman could make an approach to a man in another unit but not to a member of her own training company. If they went off on their pass weekend to have a sexual relationship with someone, it was normally someone from another unit.

There was another problem of sexual abuse on the part of drill sergeants. It was never as massive as people thought it was but there was sexual exchange across the trainee-drill sergeant boundary. When drill sergeants doing this were discovered they were court-martialled. The Army takes the position of *in loco parentis* very seriously. However, it was not always the drill sergeant that initiated the activity.

There was one instance in a company we were looking at in which a group of six young ladies had set up a pool. The prize was a three day weekend in Atlantic City; all paid for out of the pool. The winner was the one with the most conquests among drill sergeants during the course of the last three weeks of training. It was not always drill sergeants utilizing their position of power. Nevertheless, the drill sergeant was always supposed to withdraw from the situation.

The sexual tensions and the sense of utter strangeness caused by having women in the units were somewhat different than a couple of years before. There were oppositions to gender-integration but they were not the sort of oppositions we saw in 1979 and 1980.

I think we see throughout the 1980's a long-term pattern of women trying to find and assure their places in units. If I focus on anything, let me focus on enlisted women because there has always been a very basic split between officers and enlisted women in the Army. It is just beginning to change.

Enlisted women tended to be very traditional in their orientation. They wanted the traditional jobs and traditional behavior towards them as women. Officers tended to be aggressive, feminist, very career-minded and looking for every break and challenge possible for advancement. Officers wanted non-traditional assignments, enlisted women did not. Part of it is the whole question of figuring out your status and role and how you deal with men; particularly the male virility, where they are coming from and how they deal with it.

Let me talk a little about some of the observations made in Germany in the 1980's of a fairly complex situation with real and symbolic issues. The real issues involved (with the exception of the combat arms and many of the direct combat support units) the presence of women and many women leaders who would definitively be exposed to combat. From the point of view of the senior leadership, there was a basic and absolute expectation that if the balloon went up, their women were going in only one direction, east, where the Russians were. You remember the Russians? I didn't meet a division, brigade, or battalion commander who had any qualms at all about his female soldiers deploying in direct support of his male soldiers. As one of them put it, "look, I have two people in my support battalion who can fix and repair the optical sights in my tanks. I have one person who can repair thermal sights. Guess what gender they are? Guess where they go first?" He is Chief of Staff of the Army right now.

On the other hand, in the informal culture of the Army that was accepted by many of the women, there was a much different perception. When you interviewed enlisted women, the perception they held which was reinforced by the men was just the opposite. They believed that if the balloon went up all the women would either be evacuated or shifted from combat support and service support jobs to medical jobs. They would all become nurses' aides in hospitals, back here in Frankfurt, Stuttgart, Bremerhaven, or wherever. They also believed that none of them would ever deploy fully. Interestingly enough, the overwhelming majority of the enlisted women believed this. It was the topic of continuous dialogue with the men. Female officers almost never heard it. If they did, they were outraged but it was not part of their culture. It was part of the enlisted women's culture.

At the same time, I think part of the perception of this secondary status was reinforced by the fact that the Army's injunctions against sexual harassment were not taken seriously. Probably the most interesting, as well as most egregious reason, was that sexual harassment was criminal behavior which if taken seriously could end a career. The response that people got when they reported sexual harassment was terrible. I remember one captain I was interviewing. She was a very attractive young woman, very bright and very candid. For two months she was chased around the desk by her boss, a lieutenant colonel. He had twice attempted to rip her glasses off and a bunch of other things.

She went to the brigade commander whose response was to have her write out what had happened and to tell her that she was not going to go beyond the brigade commander. As part of Army culture the Army says you don't kick things out of your own bailiwick. It gets everybody in trouble. Only when you want to cause a revolution do you go to the Inspector General or the Commanding General. The answer she received which was probably the commonest pattern answer was, "you're a big girl, you have handled passes before, what is your problem?" It was automatically thrown back on her. "You are a big girl, it is a pass, you know how to handle passes, what is your problem? Can't you handle a pass? You are a captain in the Army." Nothing was done and usually it would end there. When it did not end there, people brought it to a level above. Often there was an immediate response but very often there was not.

I don't know if any of you know the history of the integration of African Americans into the Army. Truman put out his executive order in 1949 and to say that it was roundly ignored is an understatement. It was complied with almost nowhere. In 1951, after various debacles in Korea when black soldiers were being moved in as replacements and reinforcements, the decision was made that people had to deal seriously with this. What happened is very well documented. A black captain arrived in Japan and went to meet his new commanding officer. This major general refused to shake his hand after saluting. He was relieved for cause four hours later. Two colonels were relieved for cause in Europe in the next three days. Everybody got into this.

Unfortunately, even in the 1980's, nobody was given this kind of message about sexual harassment. The non-commissioned officer who asked for sexual favors to insure promotion never got his hand slapped. Very often the normative response was, "you are a big girl, you can take care of yourself, why are you coming to us about it? Did people make passes at you when you were a civilian?"

This became one factor defining a status of dependency that was further amplified and nurtured by the supposition that no woman is ever really going to go into combat; no woman is ever really going to do the job that her Military Occupational Specialty (MOS) calls for. Women are going to be withdrawn. They are going to do women-type jobs when they come back.

If I had stopped there, I would say, "gee, we are still in the middle of a terrible horror story." The thing is, we didn't stop there. As more and more MOS's opened up for women and as the density of women in many occupations increased, a great deal of this became moot. There are two things to talk about when we talk about the cohesiveness of units. One is that a very significant amount of it depends upon the kind of climate created by the unit including platoon sergeants and platoon leaders.

The other is that there is a very significant difference between combat arms units and support from service units. I am on record and print before a Presidential Commission and have testified several times against women being in infantry units for various reasons. I have also testified that I think every other MOS in the military should be open to them. Fighter aircraft, you name it. Why?

The cohesive processes in direct engagement units really are instrumental rather than affective. The language is the language of affect because that is the language Americans are comfortable with. The underlying processes are driven by the question, "is my life trustworthy in this guy's hands?" For an infantryman, no matter how technologically intensive and skilled war becomes, it still comes down to, "can he kill the enemy with a shovel or his bare hands before the enemy kills him?"

There are some other things that play into this. Infantry in the Army and Marine Corps must have a false sense of immortality, if you will, in order to accomplish what is certainly the most horrifying, terrifying, demanding, and stressful task that any human being can be asked to do. Going against weapons fire is not anything that you really want to do. A very big part of this in the informal culture of the Army and the Marine Corps is reduced to or derived from very specific sexual metaphors. There are some very good papers that Doug Bays, a division psychiatrist in Vietnam, wrote about this in terms of the rituals of incorporation of people into ground units in Vietnam, often using sexual metaphors.

It is a language that tends to last for the first few weeks of combat before it passes into fatalism. We haven't had much combat that goes beyond a couple of weeks and so it remains, for many soldiers that, "I am the biggest, toughest SOB around. That is why these people can't kill me. I will kill them first." This is all metaphoric and it is all terribly important. It is also part of the male bonding that has been part of the Army.

This is not so in support or service support organizations. Support and service support organizations bond around technical expertise. The question that people ask is, "can they do the job? Do they know how to do the job, do I have evidence that they can do the job? If so, I want to work with them."

One of the best examples of this is the medical department where there have never been any problems, certainly not since World War I. The Civil War was the last time anyone wondered about the fitness of women to do medical work on the battlefield. However, there were always the questions that underlie a lot of what we saw in Germany. I guess I have been very intrigued because I watched the arena in which much of this went away and that was the Gulf War.

The Gulf War is a real watershed in many ways in terms of the roles of women in the military. It became so for the majority of men who were still opposed to women in the military and mostly from infantry units where they didn't have any women. People from gender-integrated units expressed in all of our interviews and debriefings after the Gulf War that, "hey, they did their jobs. They pulled their weight, what is the problem?" In other words, we had the test. The test was the build-up of strength in the theater, going into combat, and coming out of combat. As far as the soldiers were concerned, the women met and passed the test. Therefore, the symbolic frame of reference began changing very rapidly.

There were some other things that were very impressive in the Gulf. Remember I talked about the incest taboo in basic training. We looked at this a couple of times in the Gulf. I would get together groups of women and discuss the issue of sexual harassment. It was always the same response, "never from my own unit; we are family."

Probably the best measure of cohesion in a military unit, even better than the scales we use, is whether or not they use the metaphor of family about the unit. We discovered this very powerfully during a COHORT program. COHORT units after a couple months described each other as family, as brothers, etc. Non-COHORT units did not. They thought it was funny when we questioned them.

The units in the Gulf, both men and women, consistently described their units as family. "We are brothers and sisters." They consistently said some very interesting things that have some very interesting resonances. When I would ask a question, "do you think it is good or bad to have women in the military?" I would very often get the response, "oh, it is terrific." Why? For males, "I have somebody to talk to about my kids' problems. I have somebody to talk to about the problems I am having with my girlfriend. I have somebody to talk to about the problems I am having with my wife. Guys don't understand these things the way other women do. It is just an immense thing for me to be able to sit down with one of the women in the unit and bring up these issues or discuss them."

I heard this over and over again. What about sexual harassment? Most commonly we heard women saying, "we are not aware of any, but I know these guys' wives. They know my husband. They would never come on to me. Where I do have trouble is with guys from other units." These kinds of comments were not as common in the reserves where there was a significant amount of in-unit sexual behavior and where people did not have the commonalities that these people did.

How did people feel about it? I was very interested in the Transportation Company of the 101st Airborne Division. We went to talk to this company specifically because they had just experienced death. There was an accident on one of the top line roads where we lost more people than we did to combat. The company commander was female. Probably the most interesting thing was said to me by a couple of tough sergeants, "she really feels this deeply and she shouldn't have to be burdened with it. Her husband is trying to take the kids away from her because she is deployed here." They then went on to talk about what a superior officer she was and how great it was to serve with her.

One of the things I experienced in the early 1980's but certainly have not seen in interviews after the Gulf, is to meet someone who didn't want to take an order from a female superior or thought there was something funny about it. In fact, as far back as 1987, I remember being in a number of interviews in which there were female squad leaders and female section sergeants who were highly esteemed because of their technical skills. These tough, tattooed young soldiers would say, "hey, boy, as long as we have her (i.e., the female leader), we are okay. She knows this business inside out." I think there have been a vast series of changes. I think there has been a very real watershed. I think the question of the roles of women in the service has shifted in terms of the dialogue.

There is no longer a question within the Army of the legitimacy of women in the service. That was a question for many years and throughout much of the 1980's. People questioned the legitimacy. The Marines were still questioning it until the Gulf War. A couple of years ago, I was facilitating the senior Marine Leadership Conference. A two star general who was the support commander in the Marine effort in the Gulf and the Marine Commandant were discussing what they considered to be the greatest mistake they had ever made. The Army, the Air Force and Navy had made a different decision. The Marines decided they would bring no women into the theater with the First and Third Marine Divisions, who were on a tour there.

The support commander looked at me and he said, "Doc, that was the dumbest thing we ever did. We could not get our logistical system up because the only people who knew how to run it were two colonels and one lieutenant colonel, (two of whom were there at the meeting) - all women. I got on the horn and I said, 'fly those people here immediately. They are the only ones who can straighten it out.'"

It has been, I think, a very interesting but normative evolutionary pattern. I think if there is a cautionary tale, it is like the business of health systems. There were studies done in civil society. Women always report far more symptoms than the men do. Women don't lose any more time from work, though. We tend to focus on symbolic issues rather than looking for the underlying behavior. Above all, we mustn't allow ourselves to get caught in these symbolic, absolutist statements. Women in the Army, women in the Navy, etc. Whatever it is like today, it is going to be different a year from now.

I think there is a set of issues that we have to be concerned about. However, my deep concern is to parse out the disturbances of the transient problems and pains that will automatically be brought about whenever a culture changes. We need to distinguish those growing pains wrought by change from what may be some of the longer enduring problems in terms of, for example, physiological or other differences or vulnerabilities between women and men. These longer enduring things in relationships may have consequences, particularly in terms of issues or psychoimmunology. How do we parse out and avoid investing the money, the time and the effort in things that will be self-limiting and self-solving? It is like a lot of the concern about down-sizing in the Army. Some of my responses have been, "yes, the only concern we should have is how do we effectively manage the pain so that we don't have people doing terrible things; beating their spouses, killing people. There is no way we can avoid the pain of downsizing. There is no way we can avoid X years of all kinds of problems because we are firing people. There is no way we can't make people depressed." The question is, "how do we buffer the depression?"

You can look at all the studies of industries that have gone under like the rubber industry. The whole city of Akron was depressed for years and, in fact, the people who kept their jobs were more depressed than those who lost them because of guilt. How do we look at this set of problems without getting trapped in the problems of each transitional period while knowing that every transition is going to bring a specific set of problems? There is not much one can do about the initial generation when you make a change. Let me give you an analogy.

We spent almost five years studying the seven things the first light division created in the Army. After the first three years, it was a very unhappy place. It was a particularly unhappy place because they were deploying and its predecessor, the 7th Infantry Division (ID), almost never deployed since the Korean War. When we would send off a battalion of the 7th ID, there would be spouses picketing the main gate. "Why are you doing this to our husbands?" At about four years, the 7th ID (which no longer exists) had made a transition culturally. We had a full cycle of people go through it. Now we were on a new cycle as a deploying division and we no longer referred back to the past. When we were interviewing families during Golden Pheasant which was the Honduras operation and during Panama, the response was much different. It was, "hey, we are the first to go. We go before the 82nd does. That is what we do." The culture had changed from a non-deploying to a deploying culture.

We tend to forget that not only had we been doing things but the problems are not new. The Army has been deploying women in significant numbers now for over a decade. It happens whenever we deploy a brigade with a support element. We deployed a significant number of women to Panama. Ten % of our force in the Gulf was female. It was higher for the Air Force and the Navy in some places. I think we have to take an evolutionary view of the process.

PARTICIPANT: Dave, what about looking for the other direction. The direction you are presenting is very helpful; that of the unit and stress with the arrow going from what is the relationship between unit and stress/illness. What about the other direction if we ask, "what about health problems more common in women regardless of cause and their effects either on the unit or their need to be studied for various issues relating to resource availability, etc.?"

DR. MARLOWE: I think many of them have been studied in terms of the common things. After all, we got a handle on yeast infections some years ago. That is why the Army routinely issues only cotton underwear. I think there are a series of issues we should know about for both women and men in terms of vulnerabilities. Whether or not there are specific vulnerabilities is an issue that I think remains moot. What we can say very simply is that routinely in the military as in civilian life, we always produce higher psychological, symptomatic profiles for women. We don't know what is contingent on this; whether or not this means higher vulnerability or higher expressivity. We do not know whether in this sense women are at great risk for disability. One of the things we don't understand, and may never understand because of the politics of it, has been the interaction between symbolic perceptions of women, evacuation and loss. Certainly over the years, we lose a higher proportion of women in basic training. Do you stress your inability to make it through the training cycle due to current illnesses? What we don't know is whether we lose them because their losses are more highly facilitated than those of men.

One of the things we do know is that losses, for example, from training bases tend to reflect both covert policies and cultural assumptions. The statistics are meaningless because losses in the first six months in the Army, and I am sure in the other services, reflect the fashion of loss at the time. There was a period in the 1970's, for example, where overwhelmingly our losses in the Army were from sexuality. This looked very strange if you compared it to the late 1960's through early 1970s, when our losses were for drug abuse. In the earlier half of the 1960's and late 1950's, our losses were predominantly for recidivist AWOL's (Absent Without Official Leave.) If you look for the commonality, it was, "what was the easy way to get out of the Army?" In the late 1950's through about 1965 or 1966, as the Vietnam War really geared up, the easy way to get out of the Army was to go AWOL three times. You then got a general discharge. That was it. Everybody knew that. All you had to do was leave three times. Nobody would send you to jail. At best you would spend a night in the stockade. You would be sent on your way.

PARTICIPANT: What about something like suicide rates?

DR. MARLOWE: The rates are so low. Let's remember that the rates in the military for suicide seldom go up as high as 60% of the comparable civilian cohort.

PARTICIPANT: Although for women, the rates are similar, right?

DR. MARLOWE: The rates are similar but again there are so few they usually tend to involve the same things such as loss of a love object or severe financial problems. I think suicide gestures (on which we don't have good data) might be a better measure if they were also a way of getting out of the Army.

Suicide is very iffy because it is so idiosyncratic and it is adventitious. It is very obvious to us, for example, that the suicides we had in 1980 had nothing to do with deployment in 1980. We know that one of them had to do with a platoon sergeant who had been dogging the individual out for two months. That was not the reason for the suicide. The kid's love life had gone bad. He had been dumped. What he had to fall back on was the unit. This is where the unit comes back in, but no one was hearing the cries for help because the unit had just had a tremendous turnover of leadership.

I am very high on individual vulnerability right now but we don't have the measures we should have. We have to learn how to do it but we also have to learn how to look at outcomes in something other than symptomatic terms. Women will always, in our culture, until it changes, be more symptomatic than men. That is a cultural given in the United States but we are not measuring function, dysfunction, or effectiveness. We talk about women's responses to illness and they are, quote, more indulgent. Let me speak as a husband. My wife, like every other wife I have known with small children, could have a fever of 104 but she still insisted on getting up and taking care of the kids and doing what had to be done. This is another expectational norm in the United States. What I am saying is we may not have the right rulers for some of this. What are the appropriate rulers?

PARTICIPANT: Let me just give another one. What about anorexia?

DR. MARLOWE: I don't know what the levels are. That is one of the problems. Is the level such that it is an indicator of anything? All I ask of a phenomenon is that we can translate it the way we do drug overdose deaths. We need to be able to take it and create a formula and say, "yes, this is an indicator for a given prevalence within a population", but we have to be very careful because some things are terribly idiosyncratic and some things have nothing to do with the environment you are in.

PARTICIPANT: Do we know, and again I don't know the answers to this, whether Seasonal Affective Disorder (SAD) is gender-related?

PARTICIPANT: It is.

PARTICIPANT: In what direction?

PARTICIPANT: Females.

DR. MARLOWE: More female. In fact, there was an article in Tuesday's "Times" which I found fascinating. There is something biological, my friends can't believe it. Long term encycling in women is much different than that in men. This may be one of the reasons for the difference in Seasonal Affective Disorder. Melatonin is the serotonin precursor in the brain that has a lot to do with heat, light, and dark adaptation. We don't know. We don't know what the consequences are because one of the things we are missing is a lot of basic research, not just physiological research. We are missing a lot of basic social and social psychological research. We are missing a lot in terms of what we truly understand in a scientific fashion about gender-based attribution and the way it controls behavior of the other. We don't know very much about it and we tend to operate on assumptions that may or may not have any validity.

PARTICIPANT: Another set of issues that I wonder about is bereavement, bereavement responses and relationships to grief.

DR. MARLOWE: One of the problems with bereavement literature is that it has been based primarily on widows because men are usually the ones who die first. Here again, I think we enter an arena which is culturally bound. If you go back to the 19th century you find the data was from descriptive, local materials including literature. Most women dealt with the death of a child or an Indian scalping the husband by just pushing straight ahead. You had no time to be bereaved because if you took time out to be bereaved, beyond a very short period of time, everybody was going to die because you couldn't feed them; you couldn't maintain the structure. We have a set of cultural norms in relation to things like bereavement that have changed fairly dramatically. I can go back and give you Margaret Mead's argument, however, for why women should not be in the Army. Margaret Mead's argument was very simple. They are too vicious and too violent.

By this theory, women would bring a level of vicious destructiveness into the military. This operates from the very basic observation that in most American Indian cultures, and in many others, women did most of the malicious torturing. Women did most of the burning of people alive. Among the Iroquois, they used to delight in flaying captives and then dressing up their children in the skins. Even the men would look askance at this occasionally. The women thought it was great fun.

PARTICIPANT: Let me add another one, Dave, exposure to the grotesque which was more likely to occur among nurses. Another is that we know from some data that single parents may be more susceptible to the effects of trauma. I don't know the number although some data suggests that there may be more female single parents than there are male single parents.

DR. MARLOWE: More single parents in the military are male. Overwhelmingly. I am not speaking proportionally. I am dealing with numbers. You have to go with numbers. Proportionally there are more females than males as single parents but they are deluged by the number of males because of the greater overall number of males in the military.

PARTICIPANT: Sure, that is always going to be true. It will always be true of anything but there certainly is a bigger proportion of females who are single parents. Let me give you an example which is a provocative question without data yet, but raised as an important issue that has to do with exposure. It is not that, in fact, there is anything genetically predisposing but that it has to do with the exposure of the environment that creates it.

PARTICIPANT: The data that you have been analyzing on spouse abuse show that military women married to civilian husbands report more spouse abuse than do active duty men married to active duty women or civilian women.

DR. MARLOWE: The first question I would ask you would be for what ethnicity?

PARTICIPANT: Again, we haven't looked at any of that yet.

DR. MARLOWE: Some of you may remember the literature from the 1960's on Intensive Care Unit (ICU) nurses and Critical Care Unit (CCU) nurses and the phenomenal level of burnout and loss. What you may not realize is that phenomenon is over almost completely now. It is over in the same way as burnout phenomena among oncologists in certain specialties is over. They have begun to win. You are no longer in a situation in which you lose almost every case you have. If the patient is alive when you get into the CCU, you have a good chance of saving him or her. You didn't then. It was a pattern of continuous loss. I remember being impressed by an oncologist in Richmond. He did a five year follow-up study of the same groups in Chicago and had a little book in which he described his five years with testicular cancer patients. Then he was drafted and stayed in the Army forever after he was drafted. Why? In those five years were the 13 cases he had won. Thirteen cases in five years. He sent them Christmas cards, presents, and talks to them twice a year. Thirteen cases. Winning in testicular cancer when he was a resident/fellow happened about 3% of the time. It is now 98% of the time. The technologies have changed so tremendously. This oncologist came into the Army and was sent to Vietnam. It was a revelation to him. Almost everybody he treated lived. Thus, I think we have to be very careful when we talk about exposure to the grotesque. Much of that is based upon loss.

The other thing that I worry about is the psychiatric casualties. I have worried about it ever since I did a tour of Thai Army hospitals in 1979 during the border wars with Laos and Cambodia. Most of the psychiatric casualties were liaison cases.

I remember one young man talking to the nurse and he was in tears. She explained that the young man tried to commit suicide. She was having a very hard time and he was having a harder time. I keep wondering about the kinds of chronic traumatic situations that our technologies or ability to save people are setting up. The young man had been cut in half by a claymore mine. The claymore took him right here and his legs and genitals were blown off but he could be saved. They did save him because Thai Army medicine is very good. Everybody there did their residencies at Hopkins, Harvard or Chicago.

The young man's girlfriend was coming and he tried to roll himself out of a fifth floor window. I keep wondering what victory there is in this kind of thing with our advanced surgical technologies for the people who are then under the burden of trying to deal with what is left of their lives. I have often wondered what we would discover if we seriously looked at some of the back ward nurses in VA (Veteran's Affairs) hospitals. We have a lot of people who have been in these hospitals since World War II with no wins and severe brain damage. Most of their body is shot away and we manage to keep them alive. These are the people we don't parade out on Memorial Day or Armed Forces Day. We never let them out of the back wards.

I don't know. I think toxic exposures is another issue. It is an issue that is probably becoming harder and harder to deal with because of the tremendous amount of emotional freight that Agent Orange and Gulf War Disease have added. The reality is we are probably under far less toxic threat today than we were when I was a kid. I remember growing up in New York in the 1930's and early 1940's. We spent most of our time clearing the black coal from our noses and lungs. We never had oil furnaces. One of the most interesting things we have seen, if you look at the epidemiology in the Northeast, is the decrease of chest and lung disease since the 1940's when we switched to oil and natural gas. Then in Vermont and New Hampshire they started going up in a geometric rate when the environmentalists all switched to wood-burning stoves. Suddenly people are coming in with lung diseases that nobody has seen since 1943. What we have done, I think has been to create a set of psychological conditions in which we are not taking any kind of toxic exposure and building it into a psycho-social, psychophysiological entity that may have terrible consequences for the people who feel they have been exposed, instead of passing it over. I am always interested in looking seriously at the number of people who were in mad houses and work houses in New York in the 19th century when all the water was delivered through lead pipes. They were not much different than lots of patients we have today. With all of our deep concerns, one of the questions is how many of these concerns are real.

To me, the tragedy of Three Mile Island is that a place where nothing happened was turned into a place where something happened. A population has been psychologically, profoundly injured by the people who came in to tell them how profoundly injured they were. The reality is enough radiation was released out of the containment building to provide perhaps one additional case of cancer in the state of Pennsylvania in 30 years. That is, it was a little less than you would get on a flight from New York to San Francisco. I think these are very serious questions. When we get to the person-environment interaction, cultural suppositions now have a great deal to do with it. I think one of the things we should be concerned with are the assumptions and suppositions that we have, true or not, about the vulnerabilities of women. How much are we building systems that will cause people to have lifelong fears and pains? I don't know.

PARTICIPANT: I was going to comment when you were talking about nurses. Some of what has changed, obviously, is greater survival of patients. Also, what has changed is the recognition of burnout and the sort of socialization that has come with it including the support groups.

DR. MARLOWE: I remain skeptical. I don't believe in burnout. I have never known someone interested in what they were doing who burned out. Most good scientists will happily work 18 hours a day. Burnout seems to be people who are very unhappy at what they are doing or not getting any support or gratification from what they are doing. It is not the intensity or demands of what you are doing. I think we have to be very clear about that. I think it makes a big difference when you are winning.

PARTICIPANT: Or you are rewarded for what you are doing in an appropriate fashion.

DR. MARLOWE: In an appropriate fashion which may not be money. There were two studies done at the same time at General Motors about 10 or 12 years ago, before the auto industry crashed. One said, quite correctly, that assembly line workers were the angriest, most frustrated, lowest job satisfaction group in the United States. The other also said, quite correctly, that none of them would give up their jobs. They wanted their kids to do the same thing because the rewards of the job economically enabled them to have a life they wanted to have without being professionally credentialed. They owned houses, fishing boats, and recreation vehicles. They got three week vacations in Canada fishing for trout, salmon, and what have you. That is what made the complete dissatisfaction with the job bearable. This is also what made it very difficult to change the way we did business in the auto industry and move to higher job satisfaction. The satisfaction had never come from the job. Again, I think these are complex issues. I sometimes wonder. I see some support groups that I think are in the business of generating psychopathology.

Something else happened. I think also the status of nursing began changing. Now, it is changing back again with the contraction of the medical system and the firing of nurses. It is a very interesting period in which nurses ceased being either slaves or serfs or sexual playthings for every doc in the hospital. This was very much a part of the pattern of nursing before. Then there has been what many people would call the Golden Age of Nursing in the United States. Now it seems to be in great danger as hospital after hospital cuts its nursing staff and has started to cut wages. Once you cut wages, you cut status.

PARTICIPANT: Army family support groups have been very effective based on our research.

DR. MARLOWE: Yes, but they are not psychological support groups in the way that many of these are.

PARTICIPANT: They do provide emotional support even though some of the support is also instrumental.

DR. MARLOWE: What they don't do is they are not in the business of symptom justification.

PARTICIPANT: No, they have another instrumental role.

DR. MARLOWE: I think some of these other support groups are in the business of symptom justification.

PARTICIPANT: They were also particularly effective during the Gulf War. One of their main functions was providing information.

PARTICIPANT: They provided a lot of things. They provide emotional support, too.

PARTICIPANT: Obviously you don't need a family support group when there is no need.

DR. MARLOWE: I can only think of the kind of thing that my older sister brought away from a support group for parents of gay, HIV-positive sons. That was, it is okay to be devastated and expect the world to take care of you because it is a terrible thing that has happened to you.

PARTICIPANT: Did she pay an arm and a leg to go to this?

DR. MARLOWE: It is not very helpful. The point is, it is not very helpful.

PARTICIPANT: I know, I know.

DR. MARLOWE: I think there are support groups that work and those that don't work. Part of it is whether or not people are helping you grasp strategies to cope with what you are doing or legitimizing your falling apart, if you will, with every thing you are dealing with.

PARTICIPANT: Could you go back to your thoughts about women in combat arms? You said something to the effect that your position was that they should not serve in combat arms. You said something about the quotation, "is my life trustworthy in somebody else's hands." Do they not think their life is trustworthy in a woman's hands?

DR. MARLOWE: In the infantry? Absolutely not, if you have got to kill somebody with your bare hands.

PARTICIPANT: Well, yes, but that rarely happens.

DR. MARLOWE: Actually it happens more commonly than people think when you get into close infantry combat. You kill people at very close proximity. Occasionally you have to kill them with your gunstock, with an entrenching tool, with a knife, or with your hands. It is that aspect of it. Let me put it this way. The average load carried by a soldier in Vietnam was 90 pounds. The average load carried in Grenada or Panama was close to 120.

PARTICIPANT: That is a different issue, though, than it is from killing.

DR. MARLOWE: Not a different issue. The issue is having the strength and ability to do certain kinds of tasks.

PARTICIPANT: So it is a physical thing then.

DR. MARLOWE: It is primarily a physical thing. I think there would also be symbolic issues about the Panama women. The upper shoulder girdle strength issue is a very critical one. Some of the issues are clearly unfair. When women stand in trenches for 30 days, indeed they get yeast infections but then the men have all been evacuated with trench foot before that. We should recognize there is a myth in feminism that somehow women bring the gentle, specific touch throughout history. That is the feminist myth.

PARTICIPANT: So women are temperamentally equal to men if they are just given a chance?

DR. MARLOWE: I refer you all to the writings of Sara Redman, a philosopher at the New School.

PARTICIPANT: Now, feminist theory has undergone a revision recently. Originally, it was everybody is equal. Now it is women and men are different but women are a little bit better.

PARTICIPANT: Some of the more recent studies are not on the technical side, though. You are really talking about strength considerations. Is it that women can't shoot straight or something?

DR. MARLOWE: No. Women can shoot very well. We give them marksmanship training.

PARTICIPANT: They would have to carry 150 pounds.

DR. MARLOWE: Those are two different things. Women can do perfectly well in a defensive position. The issue is direct engagement and bringing the battle to the enemy. Everyone expects that women will do quite well when their position is being attacked; for example, the hospital or maintenance battalion where they have to go out and get into the slit trenches and kill people. That is not the problem. What a direct engagement force has to do is move on the enemy, come to grips with it and destroy it. Remember, an Army is a fairly diverse thing. The only people we ask to do that, literally, are infantry and armored.

PARTICIPANT: Yes, but there are also some small men who will not fare well against the great big men.

DR. MARLOWE: I think you will find that those small men are rapidly swept out of infantry and never make it into light infantry. Small men are very good if you are a Russian and a tanker. Because of tank design, they have to be under five feet three inches tall.

PARTICIPANT: I can understand the pack argument but not necessarily the others. They don't seem to make sense logically.

DR. MARLOWE: Maybe I was overly influenced by the drill sergeant in my basic training who spent two days teaching us how to kill people with entrenching tools and their bare hands. That is what they had to do in Korea. They were overrun again and again and again.

PARTICIPANT: They call the Colt 45 the great equalizer, as you know.

DR. MARLOWE: It had engraved on the handle, "it matters not his shape or size, just call on me, I'll equalize." One of the things that happens in combat, however, is that people run out of ammunition. Then there are some other aspects of it.

Read my chapter on men and women in a book on the all-volunteer forces. Men evolved to have tremendous upper shoulder girdle strength because of their primary roles as hunters and warriors. Women have served a primary role throughout as gatherers and tenders; two different roles. Torturing doesn't require tremendous strength. To flay someone alive requires that you know how to use a sharp flint.

PARTICIPANT: I just wanted to hear you round out your views. I was just curious.

DR. MARLOWE: They are also on the Presidential Commission Report.

PARTICIPANT: Thank you.

Women in Combat

COL Gregory Belenky, MC, USA

We are gathered for an informal discussion with Colonel Gregory Belenky to talk about the topic of "Women in Combat" and how this impacts on women's health. Our particular project, as you may know, is a grant on "Stress and Women's Health" to explore health and performance issues as they relate to combat, deployment, trauma and disaster.

MAJ SUTTON: We were talking informally a few minutes ago about how so little is known. What can hopefully come out of our work is a foundation to identify questions that can be studied in a systematic way. We are really interested in getting beyond the issue of whether women are better than men. Women are in uniform and they are in extreme environments. We are interested in finding a better understanding of the factors that affect their performance.

PARTICIPANT: We have also tried hard to recognize the political sensitivity to this issue. We have all fallen into that trap in our own meetings on a regular basis. We try not to feel too worried about that. Please feel comfortable and relaxed. You are among friends.

COL BELENKY: When I talk about this issue I always begin with my favorite quotation from Margaret Mead which is essentially that the main problem in any society is, "what to do with the men?" Of course, she was making that observation about the South Sea Islanders that she was studying which were societies that were not really culturally developing at all. In fact, they were at a cultural dead end. Her observation was that the substantive work in the society was done by the women and that the men were involved in basically religious rituals most of the day which was unproductive and served no economic value. She was struck by the ritualistic aspect of men's work in that society. In fact, in this society that was all that was left. There clearly is that ritualistic component in all male environments. That, I think, feeds into this issue of women in combat. She was studying societies that had really, as I say, reached a dead end. There were no culture-building activities or aggressive pursuits of knowledge or development.

One of the things that has always struck me about combat operations and about discussions about combat is how much of it centers around the issues of war, why do we have wars and are wars inevitable? Do we have a choice? Could we somehow work our way out of this if we had paid more attention to those sorts of things? Something which comes up in these sorts of discussions is the question of whether there is some innate biological aggression in human beings and men, in particular, that makes wars inevitable? My reading of the combat psychiatry literature and the human dimensions of combat in general suggests that overall aggression really does not play very much of a role. On an individual basis, in fact, more aggressive people do not do well in combat organizations. There is the old joke, in the 1950's primarily when there was a draft, of the judge giving somebody a choice of, "go to jail or go to the Army." What we would now identify as sociopathic males do better in the Army than they do in civilian life. Although I think that is true, they nevertheless don't do as well in either civilian life or the Army as people with more normal personalities. In other words, they do better in the Army than they would have done in civil society, but they do not do all that well in the Army either; not in comparison to a normal cohort in my view.

The innate aggressiveness on a personal level is probably irrelevant to the prosecution of combat operations and also irrelevant as to why there are wars. I do not think it is innate individual aggression.

There is a charming story, probably apocryphal, of a Special Forces NCO (non-commissioned officer) in Vietnam who used to lead these teams out and kill the enemy for weeks at a time and then come back. One day he said, "Well, I don't need you guys. Let me equip myself here and you drop me off for a couple of weeks and come back and pick me up. I can manage quite well on my own. You guys don't do anything anyway." So, he went out. They dropped him off and came back to pick him up in two weeks. He trotted out of the tree line at the designated place and they asked him how things had gone. He said, "Well, no sooner then you had left I realized I was alone so I went about 200 meters into the jungle and set up a little perimeter and camp. I just stayed there and waited for you to come pick me up and take me back." You see, the idea is that the intrinsic aggressiveness isn't so much the issue, in my opinion.

Looking at it from another point of view, why do people fight? What sustains combat groups is the ability to get along. Men and people are able to fight because they can, in fact, form mutually supporting emotional bonds which in combat allows them, at some risk to themselves, to provide mutual support in the form of laying a solid base of fire and maneuvering. One could really look at warfare in general as a special case of organized aggressive activity. In that I would include science, medicine, business, and exploration, to name a few. This type of organized aggressive activity includes anything that involves organized groups and has some aspect of challenge. From my point of view, warfare and combat involve organized group aggression which, I think, is different from individual aggression. In other words, the people who abuse their spouses are not typically the good soldiers, in my opinion.

War obviously is very old. It predates written human history. In fact, I have two viewgraphs of Neolithic cave paintings that are 10,000 to 12,000 years old and they show either a hunting or probably a military formation. You have the column which is an essential military formation. The leader is distinguished from the other people by a fancy headdress as an indication of rank. Anatomically, most of these people appear to be men, which is another historical point.

The most complicated basic maneuver is going from column to line. It is the bugaboo of everybody. It was the bugaboo of the Russians as they were going to invade western Europe. It is always a problem moving from a column where one person is the leader and everybody else has no clue as to where they are going, to a line.

We just did a sleep deprivation study with the Marines at Quantico who spent 24 hours a day out maneuvering in the brush. This was a class of lieutenants. One of them had a materials science bachelors from the University of Michigan and several others were going to fly Navy/Marine aircraft. This was a really bright group of people, but in the dark, only the man in front of the column knew where they were going. Everybody else had no clue.

When you move from column to line and to maneuver then, of course, the situation becomes quite different. This viewgraph is a nice picture because first of all what you can see is three defenders and four attackers. One of the attackers actually is flanking, coming around, and doing a left hook. What is interesting here is that the fancy headdress is now gone and you have people on much more equal footing in a mutually supportive arrangement. Transitioning in a matter of minutes from this hierarchical formation, where the leader knows and everyone else is in the dark, to this situation where the only way you can really be effective is when everybody knows what is going on has been the common tactical problem among armies since Neolithic cave paintings.

These are some of the issues. Obviously, I have identified one thing clearly and that is the issue of bonding between people and mutual support. We think of archetypical combat operations as this small group of people maneuvering against another small group of people with some of them saying, "cover my back." That is a caricature, but that is the idea. It is in that transition and in that mutually supporting group that the mystique of the small unit in combat and all the symbolic and folkloric baggage that has grown up around that comes. It is at that point where the people circle the wagons the most when you talk about women in combat. It is there where the Marines will tell you that they see the problems. It is not clear how much of it is nature or how much of it is nurture.

There is no doubt that the bonding issue is an issue in combat operations. The other thing besides the bonding is the issue of cognitive operation. Most of the tactics in an actual tactical operation involves spatial problems. It involves grasping the lay of the terrain, having a feel for the topography, knowing where there is dead ground and safe ground and where you can actually take advantage of the situation. This presumably is rooted in right hemispheric spatial abilities. Men appear to use the right hemisphere to do spatial operations. Women use it to do affective and emotional operations, as a gross generalization. Then the issue becomes both the issue of bonding in the group and the issue of whether there are some sort of male-specific cognitive operations which are required for effective small unit combat operations.

Putting that aside, I think you also have to look at the varieties of contemporary combat experience because most people are not out there doing small unit combat maneuvers. When you are talking about integrating men and women into tank crews and Bradley crews the picture begins to change. You are now talking about practical issues in terms of ability to read displays, look through thermal sites, put cross hairs on targets, and drive the machinery.

I would submit that combat operations are evolving away from traditional maneuver elements. Obviously, the spatial component is still of the essence. You lay a combat operation out on a map so it, by definition, has a spatial component. The AWACS (Airborne Warning and Control System) manages large volumes of space, not just flat surfaces. The new Joint Stars systems will do the same thing for land combat.

My point is that the functions begin to be broken down. You no longer have the lone infantryman required to be at a distance and grasping the tactical features of the terrain which, frankly, probably a majority of people really cannot do very well anyway.

In terms of actual operational things whether it is peacekeeping or actual combat operations, most situations involve rather concrete sets of skills that can be learned and do not require any kind of mystical involvement in the idea of maleness. For example, one of our Navy ROTC summer students who used to do her 45 days active duty with us was being trained as an operator in an Orion subchaser aircraft. She was not a pilot but was back in the tail with all the equipment looking at all the scopes. In terms of that sort of thing, these issues do not even enter at all. If the person can do the job, they do.

More and more, combat environments are becoming virtual environments. The control center in Aegis Class missile destroyers for example is all virtual; AWACS is all virtual. The people in an AWACS are not looking out the window and saying, "oh, there's one, there's one." They are looking at highly abstract, processed information and the reason they are looking at it is because the visual system is the most powerful data acquisition system that the human being has. If you want to get a lot of data in rapidly, you do not use touch, you do not use sound, you use the visual system and you use it with pictures because that is what works best. If you actually looked at in terms of the varieties of combat roles today, I think you would see that the real issue is training and ability.

Regarding sex differences, I have talked about this mystique of combat. One of the big things that people emphasize is the difference in upper body strength. Upper body strength, in my opinion, is making less and less of a difference in combat operations. Having driven an M1 and a Bradley and fired and shot both of them I can tell you that upper body strength is not the issue in terms of successfully operating the machine.

You can also look at cognitive differences. There was a very nice summary published in 1974 by Eleanor McAbee and Caroline Jacqueline at Stanford, which showed bona fide, reliable, statistically significant differences in cognitive abilities between men and women primarily along the verbal and spatial dimensions; men being slightly better at spatial skills, women being slightly better at verbal skills. However, those differences, though statistically highly reliable and reputable, are nevertheless probably differences in the real world that really don't make a difference. What you are talking about is something like the statistical difference in the mean, but there is a huge amount of overlap. Since we are an all-volunteer Army, Navy and Air Force, presumably you could cull your group from here and it would not particularly matter which sex they were.

There is evidence that, in terms of cognitive abilities, spatial ability is testosterone dependent which may map into preferences and interests. The Army did a survey back in the late 1970's and early 1980's of reservists. They were trying to attract more reservists and they were interested in knowing what people found attractive about being in the reserves. They surveyed a random sample of reservists including men and women in the sample. It was not intended to be a study of sex differences, gender preference or anything like that. They found among the women that what made the reserves attractive to them were the office conditions. For the men it was the chance to get into the heavy equipment and go roaring around the country. I think there will be a lot of self-selection here. I told the Canadians that and they said, "Well, that is fine for you where you expose everybody to the same thing." They were worried that their reservists did not have any active training to be in the reserves and they never go to the field.

You can be in combat arms reserves and never go to the field. They were afraid that they were going to have a lot of people, both men and women, who had no real interest in being combat soldiers and had no exposure to it but were quite willing to take the cash for being in the reserves. They had the feeling that, on average, men at least were reachable in terms of training them for combat if and when the time came.

One fascinating study was one where female rats were injected in utero with a single shot of testosterone. When the rats were born they would behave like male rats for the rest of their lives. They would mount females. They were aggressive.

Another interesting study regarding spatial abilities was published in the New England Journal of Medicine about ten years ago. The authors of the study observed that in men and women spatial ability was pretty much parallel until puberty. After puberty started, the men took off. The men started to accelerate and the women continued to improve but basically at the previous rate. They were interested in the notion of whether this was because of socialization or was something more biological. They looked at the literature and they were especially interested in testosterone. In the literature there is basically no correlation for normal males between testosterone levels and spatial ability. In fact, there was no real correlation between that and aggression.

They identified a group of men with hypogonadism. These are people who have subnormal testosterone pulses at puberty. In these people, the size of the testosterone pulse at puberty is demonstrated to be correlated with testicular size once they reach adulthood. They took this group of men with a spectrum of testicular sizes dependent upon the pulse of testosterone they had during puberty. The hypogonadistic men as a group had lower spatial ability than average and there was a linear correlation between testicular size and spatial ability. They interpreted this as indicating that the spatial ability part of it was almost entirely biologically determined and had relatively little to do with socialization. That is how they interpreted it.

Turning now to the affective and emotional issues, there is a lot of pop psychology these days saying men are more instrumental in their expression of emotions. In last week's Science there was a nice article where scientists at the University of Pennsylvania took 60 normal people, (two-thirds men, one-third women) and did positron emission tomography studies on them in the dark at rest. They showed that overall basic metabolic levels were very similar from men to women. This is despite the fact that in the past people have thought that they have found higher metabolic rates in women. This turns out not to be true. There were some differences in patterns involving temporal cortices, limbic areas, and singular cortices; the sort of things involved in emotional and affective responses. At the end, they said there are more similarities than there are differences, but offered no evidence of that. First of all they described all the differences and then they said it is not really so useful to study brains at rest. If you really wanted to see differences, you ought to define sets of problems that women are good at, have both men and women do it and then scan them. Then do the reverse. Then you would get some idea functionally of what happens in the brain when women are doing what they do in the verbal area better than men; and when men are not doing it as well and then what happens. That would probably be a large and costly study because of the positron emission tomography.

My feeling is that the cognitive issues and the physical strength issues are non starters. In contemporary combat operations you do not need to be physically strong these days. The ones who need physical strength are the soldiers who are moving the ammunition from the trailers to the 155 Howitzers. They are also the only people that do not need any sleep because they do not have to think. There really isn't any other job in the Army that we could find where people do not have to think except that one. Even that one is going to be automated in ten years.

The problem of troops deploying in a line in the dark and not knowing the tactical situation will all go away with the soldier's computer, GPS (Global Positioning System), and helmet-mounted displays. You will be able to see your squad's little red lights. You will know where they are, you will know where you are, and you will know where you all are on the topographical map. In other words, you will be more vulnerable but you will be in a similar position as the people in the AWACS. It would seem to me that the small, slight mean differences in cognitive ability do not really matter very much. We are left with the bonding, emotional affective area of things where the remaining questions lie. We may not be able to answer these questions short of actually trying it over an extended period of time and allowing people to self-select and work out what is good; what is not.

Regarding the emotional aspect of bonding of crew in a crew-served system, I think men and women would all do equally well in any capacity whether it is pilot/crew, an Aegis control room, an M1, a Bradley, or an Orion. I do not see it as being an issue where women could not do well and do as well as men.

There was a wonderful Doonesbury comic strip where Joanie Pockets had a little boy and she was talking with a friend. They were sitting and talking at the kitchen table. She said, "yes, I bought my little boy a cooking set because I don't want him to be forced into this masculine aggressive mold." Just then the boy pops up from under the table. He has the pot on his head like a helmet and he is holding the skillet and going "booda, booda, booda, booda, booda." Then they both look at each other and say, "oh, well, maybe there is more to this biology thing than we thought." It may influence not so much the ability for people to do things but their interest. You may find, if you really throw everything open to everybody, that in terms of the actual nitty-gritty down in the dirt combat arms, the majority of people who are interested are men. My guess is, if one is genuinely interested then one will do just as well as anybody else, whether one is a man or a woman.

I really do not have a feel for the issue of the emotional aspect. I do not think bonding is so much of an issue given that men use it in order to survive in combat and I assume women will do the same. It may turn out to be differently organized. Some of the symbolic things may change but I think that everybody will do equally well.

From my own experience in DESERT STORM with the medical troops of the 2nd ACR (Armored Cavalry Regiment) where there were a lot of women, we saw some pretty difficult things in terms of treating the wounded Iraqi soldiers. Everybody took it in stride, men and women both. Fortunately, we did not see any American casualties but we took care of a lot of wounded Iraqi soldiers and a lot of civilians.

In terms of the operation, itself, I am reminded of this one woman who was a medic who drove one of these crackerbox ambulances. She was all of four foot two. In the crackerbox you could barely see her head peering over the steering wheel and over the hood, but she never got stuck which is more than I can say for a lot of other drivers. She did her job magnificently well and was a source of morale and support for everybody else.

In practical terms, I am hard put to see that women could not be deployed in combat. I think the issue is interest first, training second, and command climate third. You have to want to make it work.

PARTICIPANT: Colonel, have you looked at the Navy support ships that have been integrated for a while?

COL BELENKY: I do not know. I can say something about the issue of sexual relationships within the ranks. I observed a lot of that while I was in the Gulf. It was all in the rear areas where people had nothing to do. It occurred where people had time on their hands, where there weren't the demands made and people were basically bored. There were some people who got involved in flirting and so on and there was that couple who got captured by the Iraqis while they were out in the back of a truck. It must have been very embarrassing for them. I think that is the exception rather than the rule. Loree, you could say something about that. Your unit was equally divided between men and women.

MAJ SUTTON: My experience has been that when the command emphasis is directed towards the shared primary identities of men and women as soldiers first, the unit cohesion issues including the bonding goes along much more smoothly. For example, in DESERT STORM there was never an issue about sleeping in terms of who slept in which tent. You slept with your working groups, so it was mixed by gender. The people you worked with were the people you slept with, the people you lived with, the people with whom you learned to survive. During the cease-fire period one of our lieutenant colonels became sexually involved with his female driver and at that point the brigade commander put down an edict stipulating that, henceforth, there would be no more mixed sleeping in tents. The fervor that came out of that was just awful. All of the sudden you had the no-no factor. People were reminded again that, "we are not brothers and sisters in arms here, we are men and women who are suspected of doing these things."

There is a lot of anger, a lot of resentment and it is an issue that, I think, comes up with spouses. It is one thing for a spouse to think about her husband going off to be deployed some place where the only opportunity for sexual indiscretion is with a native population, possibly prostitutes but something very different than women who share the same culture. My fear is that it is going to return to, "we would not ever let our soldiers of different genders sleep in the same tents or in the same areas." I think again it gets back to that issue of where is your primary identity when you are in uniform?

While out of uniform there are many women soldiers who happen to be a spouse but when in uniform your primary identity is that of a soldier. You have to be very careful in terms of not blowing that identity.

My very first deployment was in the Sinai, Egypt. This was a situation where we had 900 men. The ratio was 900 men to about 30 women on this post. I did a lot of consultation with the women about half of whom were brand new privates. This was their first Army assignment. I think we are asking an awful lot of 18 and 19 year olds to put them into an environment like that and not give them any clear boundaries in terms of what is to be tolerated and what is not to be tolerated as far as sexual activity goes.

My bias is, if you are going to put women into combat arms small fighting groups, you have to make the sexual taboo explicit. It is not just a gay issue. It is a sexual issue about sexual behavior. If you want to maintain that family unit you have to have the incest taboo in place at all times and focus your attention on the primary identity in that setting as being a family.

PARTICIPANT: Playboy Magazine had an article about women in combat. The analogy that the author used was that of a cook in a unit and how important it is for a cook in a unit to not transgress the boundaries of when, how and what he or she feeds the rest of the people. Once you do that you have created all sorts of imbalances in power; when it is shared deprivation, everyone can commiserate together.

COL BELENKY: Nobody minds.

MAJ SUTTON: Right, and they can be bonded in that misery but once that transgression has occurred and you see this happening sexually, the tensions occur.

COL BELENKY: That is an excellent point.

PARTICIPANT: You would say that there is no such thing as identity. It does not exist separate from the interpersonal network in which one is situated and is merely another way to express the probability of certain behaviors. The question is what are the contingencies that either increase or decrease the probability of certain sets of behaviors? That identity does not exist anymore separately than does personality from the setting which one is in. The issue is what are the contextual drivers of certain sets of behaviors and how to maintain a set of contextual regulators or directions or goals that will in fact sustain particular sets of behaviors that you want and inhibit others that you do not want. Now practically, it turns and points you to a different question. If the idea is how do we give people a soldier identity, it may require very different leadership.

PARTICIPANT: Well, doesn't identity imply something about the surround?

PARTICIPANT: I think that is what Dr. Holloway would say. He would say it absolutely implies that it does not exist, and that you only have an identity within a particular context.

PARTICIPANT: You have to consider where our troops are coming from, particularly our 18 year olds. What is their identity within their family and their sexual roles within their family compared to their identity in their high school class?

PARTICIPANT: There is also their identity on the street and their identity in the work environment. Personality is a series of probable behaviors and probable behaviors are all determined by whatever contingencies may occur.

COL BELENKY: Human beings see things all as a piece. They like their activities to be coherent and make sense in terms of others so they do have a conceptual overlay that pulls together and integrates all these little disparate pieces. That is what we call personality and that is what Dr. Holloway leaves out, i.e. the fact that it is not just a Skinnerian reinforcement. You eventually lose the focus. I think that you are right in the sense that you have to do more than say, "okay, we are all soldiers here, enough said, let's drive on." Just saying that is not going to do it. A command climate that encourages professionalism and professional interaction is really saying the same thing but the commander also has to have in mind a gestalt process.

PARTICIPANT: I think you said exactly what Dr. Holloway was driving at. I think what drove that comment was, in fact, your comment about sexual relations in the ranks as related to boredom. That boredom in that context was, in fact, loss of contingent behavior.

COL BELENKY: Absolutely, because there was nothing to do. There was no command and control. There was no discipline. There was no goal. There was no overarching objective. They literally had nothing to do.

PARTICIPANT: I think there is also a set of cues. There are cues within a setting that they are keying to. What are the cues when you segregate men and women who are supposed to function in the same unit? You are generating issues of privacy, seductiveness, and inquisitiveness. There are a lot of sexual overtones to separating people and making a clear distinction of their sexuality separate from their use and belonging within a unit. Whereas, in more of a family or a close-knit unit there is an openness and a familiarity, almost a non-sexualness which may be societally driven by growing up in families or may be driven by being in constant contact with opposite sex members. I think that there is that issue too, not just what is the role but what cues are you keying people to, biological or psychological?

COL BELENKY: I agree. You separate people. I think you set up exactly what you say.

MAJ SUTTON: Well, you remove a set of possible contingencies.

COL BELENKY: Right. There is nothing like being in close personal contact to discourage intimacy.

PARTICIPANT: The more of the warts you see, the less attractive people seem.

COL BELENKY: That is right. That is my solution to teen pregnancy and teen marriage.

PARTICIPANT: In mixed sex crews on four ships where they were all support ships there was one case where the commanding officer explicitly stated, "none of our crew will have romantic relationships with one another. They won't date and they will not have sex." That was the ship that had more disciplinary and other problems than any of the others. It may well have been that there were other issues of command on that ship. However, it was very clear that ship was well known to the psychiatrists and psychologists as the ship that was going to have more difficulty. In the other ships, the commanders did take people who were out of line to captain's mast. On this one ship the command decision was to make the same kind of blanket distinction and response that occurred with the lieutenant colonel and his driver.

In small units when you form groups, and on-board ship it would be within work centers, you really can encourage more of a sibling sense where siblings would tend to protect one another including protecting from sexual transgressions by outsiders. That was a very striking example. That ship was very well known to all of us in the medical field as having more difficulty than any others. I cannot tell whether it was other issues of the command climate. In those ships that said, "we are all sailors, we have a job to do and here are the limits to what we will tolerate; we are going to hold individuals responsible for going beyond those limits," there were less problems with morale.

There is the reality of the pregnancy issue in mixed combat units. The command put in their medical department's budget that Depo-Provera is the number one top item. They did have a realistic approach to it. It created a different climate than the antagonistic climate that existed on the one ship.

PARTICIPANT: Does the management of boredom of mixed sex groups require different types of intervention than single sex groups?

COL BELENKY: What happens to Marines who are bored? They fight. They get drunk. They have trouble with the civilian population. What happens in mixed sex groups? They might have sex. They also get drunk. They fight and they have trouble with civilian populations.

PARTICIPANT: That actually is a testable question, that one can, in fact, take groups and require that they do nothing and in fact see how the groups handle that.

COL BELENKY: It is hard to make work for people. You know, really the best thing is a mission that actually requires everybody's talents and is hard and keeps people focused and drives them pretty hard. Then everybody shapes up and does well and everybody is a lot happier. That is true of any organization.

PARTICIPANT: You were talking about how when you set up the different tents you remove a contingency. That was great. I would like you to actually spell out what the contingency is because that was not self-evident to me.

The other question I wanted to follow up on is to return to this identity versus Dr. Holloway scenario because you made the statement that the leaders would do something differently if they were operating on the identity difference notion versus the contextual notion. I wonder what the leader would do differently but I would appreciate it if you would spell that out for me.

PARTICIPANT: I think some leaders would, in fact, say this is a bad apple, get rid of him. That identity would drive and foster the picture that this is a person problem rather than this is a group issue. It is not a question of management of the group. It is a question of a bad apple; get rid of that person.

PARTICIPANT: That is very interesting to me in light of the discussion we just had. It suggests that the leader who operates on the identity principle, namely identifying this lieutenant colonel and ousting him, would be more effective in terms of unit cohesion than the leader who operates on the contextual principle.

PARTICIPANT: Once you have somebody transgressing you do have to take some disciplinary action.

PARTICIPANT: Another question comes to my mind in terms of differences in managing boredom between the same sex and different sexes. It would be interesting to compare the findings in that study to a study across MOS's or occupational groupings because I think there tend to be strong cognitive personality differences among the people who will have interest, for example, in going into personnel versus those that will have interest in going into combat arms or the medical field. I wonder if you control for all that, how the sex differences would survive?

PARTICIPANT: Right, exactly.

PARTICIPANT: Do the personality styles and interests at some point supersede?

PARTICIPANT: Boredom, itself, might be different. It might be generated in a different way in different subgroups. In other words, how do we decide we are bored? How do you end up getting to the point that you are bored, and thinking developmentally that with females, it might come about in a different way. Male adolescents might get bored. If they go out and run around or something they are cool, they do that, but with females it is different. I felt, developmentally, that you were doing something one way and it was working and then all of a sudden rules were imposed and it changed. Sometimes siblings share a bedroom with an opposite sex and then when you hit a certain age it changes. In other words, there is something interesting in your situation because a change happened.

PARTICIPANT: It became an adolescent nightmare at that point. It went from latency to an adolescent nightmare in terms of the ranges of behaviors, expressed feelings and turmoil. That was my experience of it and I have seen that now in a variety of settings. Another issue that I am very much concerned about are the different pressures that women soldiers have to deal with depending upon their age and rank. In other words, the issues that 18 year old privates have to deal with are very different from those that a 25 year old sergeant, a 30 year old captain or a 45 year old general have to deal with. That is where I get back to the sexual boundary issue. You have 18 year olds who have just come from their family environments so they know what it is to be a member of the family, hopefully a healthy family. They know what it is like to be striving for popularity in a school setting. You then put them into a setting where there are no clear boundaries other than the ones that they are able to set up. They are the one person, in this case on a sexual level, who is being sought after by dozens and whose status within the unit depends on how that 18 year old private handles that. I think there are enormous pressures there.

PARTICIPANT: I wonder if you want to comment specifically about issues such as anxiety, response to trauma and injury, and any types of gender differences?

COL BELENKY: We are just getting into running both men and women in our sleep deprivation studies but the literature would suggest that women do slightly better with sleep deprivation than men in terms of being able to perform despite not having enough sleep.

The issue of an 18 year old private being bullied into having sex with some more senior person is a serious one because then immediately she loses her status and her identity is at that point gone as far as the rest of the unit goes. It is the same pattern as you see in spouse abuse. The abusing spouse tries to convince the abused spouse that they are the only game in town and no one else will listen to them. It is that mechanism all over again and that is a very destructive, pathological, terrible relationship that does nobody any good. The commander has to be sure that that sort of thing does not happen. The way to solve the issue of gays in the military is to treat the issue as a sexual harassment issue and make sure that sort of behavior is not tolerated regardless of whether it is homosexual or heterosexual. That is the real issue.

PARTICIPANT: They should treat it as a power issue?

COL BELENKY: Yes, it is a power issue. Absolutely, it is a power issue that then gets translated into a sexual issue and then spoils the relationship of the abused party to the rest of the group.

PARTICIPANT: Do we have any data or knowledge about the perception and management of power in like-sex versus mixed-sex groups?

COL BELENKY: That is a very good question and that may actually be the nub of all this. I am assuming when I am saying that everybody will do equally well; that the power relationships will be handled. The hierarchy notwithstanding, in combat operations people tend to be much more equal. Everybody does what they can and there is a lot more equality. The Army turns itself inside out, from being very hierarchical and very structured to being much looser. It is that sort of transition then that empowers everybody. In many ways, for men at least (and I do not know if it is true for women) when you are in a tightly knit group it actually enhances individuality because you do not have to be all things to all people anymore. In fact, being a member of a group enhances individual identity in a paradoxical way. Group membership increases and enhances individual identity and makes people emphasize individual differences and define themselves in a more unique way. Whereas, if they are not part of a group, they tend to back towards the mean and try to be Everyman or Everywoman. I am not sure that that is true of women.

There was a nice thing in the New York Times science section talking about dating behavior and courtship. They observed behaviors in bars and looked at the residual mammalian body language; the open palm to indicate that you are not going to do any harm; the tilting of the head to expose the neck to be vulnerable. Even people of age, education and seniority still do those sorts of behaviors and that becomes very powerful. One of the things they mentioned in this New York Times article which I thought was absolutely fascinating was that they looked at some small, relatively isolated religious community. I forget which one it was. It was one I actually had not heard of. Everybody tended to marry within the group. On the other hand people were basically free to choose mates within the group. They found that people overwhelmingly chose mates who were HLA (Human Lymphocyte Antigen) incompatible. Now how did they know that? Did they go down to the local blood bank and do HLA compatibility tests? Obviously not, and yet that is what happened and they were theorizing that this must be something to do with sense of smell. They were talking about olfaction and what a powerful influence it is over behavior. They postulated that people could detect HLA incompatibility through their sense of smell and were drawn to a person with HLA incompatibility because this would make for fitter offspring. If you really have human behavior as biologically determined as that in what we consider to be these profound and romantic choices then the issue becomes does the neocortex really have the capability to get them under control?

PARTICIPANT: Couldn't cohabitation actually work in favor of not having sexual intimacy, like it would in a family. The sexual urges in a family are not as much as they are outside.

COL BELENKY: Exactly.

PARTICIPANT: At the company level I think it may be a family. The commander assumes the stereotypical father role; the first sergeant, the mother role in a small unit level. If you are talking in terms of platoon or a squad size, there is something different.

COL BELENKY: It is different, and that is more and more the operative element. The squad and platoon is where the pressure to do the job comes down. The company is almost becoming less relevant in combat operations. I do not really know the answer to that question but it is fascinating to think about in terms of biological determinants of behavior. I think we are talking about mechanisms that are invoked that are basic and very powerful and that people are blissfully unaware of most of the time.

PARTICIPANT: Let's ask along a different way, back to the aggressive notion. This notion of if there were women ruling the countries there would not be war.

COL BELENKY: Margaret Thatcher would disagree with you.

PARTICIPANT: Yes, she would. At the same time, there are a lot of people who make a lot of claims to that effect. The question I would like to ask is, do you see any differences in terms of what would happen in the roles between the sexes when having to pull triggers and kill people? The related question to that is what do you think about social views in terms of accepting women pulling triggers versus men or for that matter, body counts of men versus women getting killed among our armed forces?

COL BELENKY: Well, the last issue I cannot even speak to because it has become so overwhelmed by the media. We lose people to countless ridiculous things every day that nobody cares about at all, some of which are thoroughly preventable. Yet we belabor this issue of death in combat.

The other issue, well, I do not know. If you take what really is the contemporary Army weapon system, the tank or the Bradley or a plane and you have a woman as part of a crew, I do not think that is even going to be an issue. You are all in it together. You are supporting yourselves. If you do not do something you are likely to get seriously hurt in return. You may have a very short period of time in which to handle that. Maybe men are more instrumental in how they express their emotions and women tend to talk about things. That may or may not be true. I do not know. It seems to be true. Nevertheless, under the pressures of the moment I think everybody will put the crosshairs on the target and pull the trigger. If you hit the right thing at the right time, I do not think there would be a lot of fallout from that. Maybe in the press but, personally, I do not think that people would have great difficulty. The responsibility in a crew is so diffused among the members; there is somebody who is loading -- everybody plays a role and I really do not see that as being a problem.

As far as the issue of women killing in combat, I certainly do not see it as an issue for women fighter pilots or women bomber pilots. In so much of combat, you never see the enemy. So much of DESERT STORM was hot spots and action at a distance. Then you drive by the burning tank later but you almost never see the tank directly. It is not personal. It is not up front and personal violence and in any case, I am not sure that women are any less able to handle that than men are. I think the reason men have predominated in combat operations historically, why most wars have been fought by men, is because of the issue of physical strength and the sexual dimorphism in size.

One of the points I forgot to make was that in all areas that women have been excluded from that they are now participating in, women are doing just fine. I think that when you factor out the physical aspects in modern combat operations the issue of strength is irrelevant. Really the issues are brains, training, endurance and ability to get along. I think everybody has the ability to be mutually supportive. I think that the small differences we are talking about in the work place become accentuated in intimate relations because we do invoke these very primitive mechanisms and everything tends to fall apart under those circumstances. If you punish the people who are actually transgressing, what does punishment do, in animals or in humans? It suppresses behavior. It does not change motivation. It does not make people think differently but it sure makes them act differently as long as that contingency remains present. Relieve the contingency and the behavior returns.

The contingencies do make a difference. What that brigade commander did was wrong. He did not punish the individual and then he punished everybody else. My own feeling, looking at 2d ACR and the other groups that I travel through and see, is that you are best leaving the sleeping arrangements at a local level for decision. Brigade commanders, battalion commanders, even company commanders should not be making that decision. The work unit itself should decide what it wants to do and that should be up to the people involved. Then you will have far less trouble than if you have the poor commander who has neither the time nor the inclination for thinking about these sorts of issues. He ought to leave it up to the people on the ground who actually have to sleep in these arrangements to decide what the arrangements should be.

PARTICIPANT: Thank you for being with us today.

COL BELENKY: Thank you for having me. It has been very interesting.

PARTICIPANT: I hope you will come back and chat some more with us.

Trauma and Vietnam

William E. Schlenger, Ph.D.

It is my pleasure to welcome Dr. Bill Schlenger who is the director of the Mental and Behavioral Health Research Program at the Research Triangle Park in North Carolina. Dr. Schlenger is a psychologist with research interests in psychiatric epidemiology, delivery of health, mental health and substance abuse services. His many professional experiences include being the co-principal investigator of the Coordinating Center for the Multi-site Study of Behavioral Strategies to prevent the spread of HIV infection. He is currently the principal investigator for the study of etiology of readjustment problems of Vietnam veterans, as well as being co-investigator of a women's inmate health study. I will not belabor Dr. Schlenger's many professional qualifications. Today, he is here to talk to us about trauma in Vietnam.

DR. SCHLENGER: Thank you. I appreciate the opportunity to come and talk with you, particularly in an informal setting, about things that we are all interested in. I understand from Bob Ursano that one of the major topics of interest to you currently is exposure, traumatic exposure and its effects on women in the military. I am here two months too early to talk more definitively about that issue than I might otherwise. We are in the middle of some analysis of data from the readjustment study where we are looking more closely at the etiologic factors. I thought I would spend a couple of minutes talking about some findings that we have from that data about vulnerability in men and what that might mean for women and for analysis of women.

DR. URSANO: I do not know if you have it at your fingertips, but if you could review briefly what was in the NVVRS (National Vietnam Veterans Readjustment Survey) which you had published previously and PTSD (Post Traumatic Stress Disorder) rates in women, or even your thoughts about it, it will help bring us up to speed.

DR. SCHLENGER: NVVRS was one of the first major epidemiologic studies that actually included women. It studied the kinds of exposure to trauma that women in the military have and what the impact of that exposure might be. When we started analyzing the data, one of the first things that jumped out at us in looking at women in the military (at least in the Vietnam era, and it is substantially different now, I think) was the relative homogeneity of women from the Vietnam era. That is, they are 90 to 95% white. They are almost all officers. They are almost all college-educated. Roughly 85% were either nurses or other health care professionals. The other big group was air traffic controllers. If you had a sample of male Vietnam veterans on one hand and a sample of female Vietnam veterans on the other hand, you would find that the female veterans were much more homogeneous and particularly older than the males.

Our finding at the basic level about the prevalence of PTSD was that, in men, the prevalence was about 15% and varied strongly by level of exposure. In women the rate was, I think, 8.5%. Thus, it is a lower rate in women but still a substantially higher rate than people anticipated in advance.

One of the questions that often gets asked that we have not actually analyzed is why is there a rate difference between men and women? Although we have not analyzed it extensively, my knee-jerk answer to the question of why are there rate differences in the prevalence of PTSD between one group and the other is that probably the single strongest explanatory factor, is almost certain to be what they were exposed to.

The profile of exposures that women in Vietnam would have had was substantially different than the exposures of men; and the interview data bear that out. The level of exposure to traditional combat experiences, being fired on, firing a weapon, those kind of things, is much lower in women, but it is not zero. That was another mildly surprising thing to us, that the report of women about their exposure to what you might think of as more traditional combat experiences was higher than we thought.

Probably the most important factor in exposure in women, was this notion of exposure to death, dying and mutilation. That is exactly what you expect given that we are talking about nurses and hospital personnel of one kind or another.

To answer why there are differences between groups, even if I do not know what the groups are, I first look for differences in exposure. I would then look for differences in what we think of as vulnerabilities. That is why I am two months too early. We have studied in some detail the influence of different kinds of vulnerability in men but not women, as yet. When examining men we discovered, and I think this will be true of women as well, that if you control for exposure or what happened to them, then you need to ask what kind of things make people more or less vulnerable to the development of chronic PTSD?

The answer is, at least among the factors that we have looked at, the most important vulnerability seems to be age at exposure. As one might guess the younger you are when you are exposed the more likely you are to end up with PTSD. I forget what the rates are, but if you look at men and at their PTSD rate by how old they were when they were sent to Vietnam, the curve is very high at 18, 19, 20. It drops off substantially the older you get that exposure; again, that is controlling for what they are exposed to. You might expect that nineteen-year-olds are likely to be infantry soldiers rather than officers so they are much more likely to be in the middle of traditional combat experiences. However, even when you control for those factors, for what they were exposed to --

DR. FULLERTON: Is that a linear trend or does it hit a point where the increase is not as much?

DR. SCHLENGER: We have not looked at that as carefully as we need to, but it looks like when you get past age 22 or 23 it seems to flatten out pretty well.

Another factor, in addition to what they are exposed to and how old they are, is the presence of antisocial personality disorder (ASP) at the time they went to Vietnam. That is, if there is evidence that they were suffering from ASP before they were sent, they are more likely to suffer from PTSD in the long run; which was not true, surprisingly to me, of a number of other psychiatric disorders. For instance, if they had major depression prior to their service, it was not a risk factor when all of these other things were controlled. It was a bit of a surprise to me.

The other factor that holds up in these multivariate analyses is the report of the veteran that he was abused in one way or another as a child. Our measure of that is an extremely weak one. It is a single question in a survey interview that is worded more or less, "were you abused as a child?" Thus, it is a very crude measure. It is not clear exactly what the response means. I probably ought to say just a couple of words about how this analysis was done.

DR. MARLOWE: Could you discuss the population size, who they were, and what the diagnostic criteria were?

DR. SCHLENGER: The NVVRS sampled 1,200 male theater veterans. The dependent variable, PTSD, is measured in this multiple measures way where you had to be positive on a number of measures before we called you a case.

DR. MARLOWE: Which measurements?

DR. SCHLENGER: The SCID, the Mississippi, the MMPI (Minnesota Multi-phasic Personality Interview), the PTSD scale, IES (Impact of Events Scale), and the Stress Response Rating Scale, a clinician administered stress symptoms scan. The sample is a nationally representative sample so it includes officers, enlisted, black, white, Hispanic, Asian, et cetera.

DR. MARLOWE: Is it a Gallup-type sample?

DR. SCHLENGER: Actually, the sample was drawn from military records. In principle, we identified the 8 million records of people who served during the Vietnam era and drew a sample of those who had served in the theater and another sample of those who did not. In principle, the external validity of the sample is quite strong. It is a nationally representative sample.

DR. MARLOWE: All services?

DR. SCHLENGER: All services. As you might expect, there is a substantial rate difference between those who served in the different services. The PTSD rates for those who served in the Army and the Marines is much higher than Air Force and Navy. However, it is not zero in the Air Force and Navy.

DR. MARLOWE: Just one other question. Do you make any attempt to check the unit history of exposure as opposed to self-report?

DR. SCHLENGER: We were not able to do so, and it is always a question. Is the self-reported exposure, military history information valid? You may have followed the CDC's (Centers for Disease Control and Prevention) travails in the Agent Orange study where they examined in detail the unit movement records and finally concluded that the records were not strong enough to do that. We had the military personnel record of everybody in the sample. In terms of looking at the validity of their self-reported exposure, we were able to look at some indicators. For instance, the receipt of different kinds of combat medals, Purple Hearts and those kinds of things. On the set of indicators that we were able to get from the military records, comparison of them with the self-reports suggested pretty good validity. It is not perfect but it is some information. It is true that the exposure information is self-reported and that is a limitation.

In the analysis of vulnerabilities, we took a set of about 25 or so characteristics that might be considered to be vulnerabilities and we divided them into two sets. One of which we perceived to be the more objective set and the other we perceived to be the less objective set. By objective we meant characteristics whose value was unlikely to be influenced by your current status. That is, we saw it as unlikely that whether or not you had PTSD today would influence whether or not you were Hispanic or you reported yourself to be Hispanic; or your report on whether you were drafted or volunteered for the service; or your age at the time you were exposed; or your education level; those kinds of things.

In the less objective set we included things like our measures of the presence of psychiatric disorder before you went to Vietnam. We saw that as less objective in the sense that if you were a case of PTSD today, your report of your symptoms from earlier in your life might be influenced by that. So we considered that to be less objective. This also includes your report of things that happened in your childhood. For instance, were you abused, did your mother and father have substance abuse problems, and were they ever in a psychiatric hospital, et cetera? Those kind of things we looked at as potentially influenced by your status at the time you reported them. We considered them to be less objective.

The modeling strategy was essentially a hierarchical strategy in which we first controlled for exposure, then found our best set of objective characteristics and then added the less objective characteristics. In essence, the analysis answers the question, "controlling for exposure, which of the more objective characteristics confers vulnerability when all of them are controlled for?" We take the objective characteristics that are significantly related and then at the next step we say, "okay, in addition to that, which of these less objective things add something to this?"

DR. URSANO: That strategy is similar to one that Bob Rosenheck used in his paper in trying to look at the contribution of present meaning to PTSD syndrome.

DR. SCHLENGER: Right, and our finding is that the equation with exposure and objective and more and less objective sets accounts for about 26 to 27% of the variance; much of which actually is attributable to exposure rather than to vulnerabilities.

The three vulnerabilities that remain are age at the time of exposure, presence of ASP, and this item about abuse as a child. What might we draw from that about what we might expect for women? I expect that when we do the analysis for women we likely will find age at exposure to be a factor, but a less important factor; largely because the women who served in Vietnam were much older so there were many fewer at the lower age range. We are likely to see that as a less important vulnerability. We are interpreting age not so much as a matter of your biological age and your physical maturity but as a proxy for some notion of emotional maturity.

We would expect among women Vietnam veterans that the presence of ASP at the time they went to Vietnam would be much lower; probably virtually nil since these are mostly college graduates and officers and so on and so forth. In a study we did of psychiatric disorder among women in prison in which we looked carefully at ASP, PTSD and borderline personality disorder, we found a substantial overlap, co-morbidity, among those three. That means that if you find a woman in prison who has PTSD for instance, very likely she also meets the criteria for ASP and for PTSD.

DR. URSANO: The last one?

DR. SCHLENGER: Borderline.

DR. CARDEÑA: Is there a relationship between your item of abuse and ASP?

DR. SCHLENGER: The relationship actually is quite small. The correlation is on the order of 0.1, 0.2 which was something of a surprise to us, I think. We did not have a good measure of borderline personality disorder to use at that time. We might want to do that if we were doing it again.

DR. URSANO: Clearly there is an overlap in the question of some of the symptom issues between borderline and PTSD, but even in ASP, I was thinking that for antisocial, there probably is a relationship. One solid relationship would probably be previous exposure to trauma. In Naomi Breslau's study, she rates people with previous trauma in inner city Detroit. There may be a sensitization or inoculation issue as well as all kinds of other things.

DR. SCHLENGER: Right, the sample of women in prison is not the best one to study that because of the rate of exposure variance. Everybody in prison has a lot of exposure.

DR. MARLOWE: There is a lot of observational material and some statistical material from World War II and Korea indicating a relationship between younger age and the higher probability of battle fatigue. The other observation that was consistently made by people is what was then called the maturity reaction. It was another component of risk of breaking down.

We looked at people in the Gulf both before and after the war. Our basic finding using the BSI covered the individuals who met an algorithm we created out of the BSI, IES, and questionnaire material. Those individuals that demonstrated the highest risk in terms of presentation of symptoms and possible diagnosis of PTSD were the ones who were most labile in the pre-combat period and who came essentially from the highest quartile of psychological symptomatology. Approximately 65% of the people who met the PTSD algorithm were in the highest quintile out of 2,500 people who were looked at before and then looked at again after. That there are predisposing factors we have no doubt about.

DR. SCHLENGER: We have an application that we cannot convince the NIMH to fund. However, there is an ongoing study at Duke of coronary vascular disease in a group of people who were students at UNC (University of North Carolina) in the early to mid 60's. It is an existing coronary heart disease study. All of them as part of enrolling at UNC took the MMPI as freshmen and sophomores. There are a lot of Vietnam veterans in this group so they all have MMPI pre-exposure.

DR. MARLOWE: Not necessarily. There were something like 50 Harvard graduates who served in Vietnam.

DR. SCHLENGER: In this sample of 2,000 that they are following, there are 700 who were in the military and 400 or 300 of them who were actually in Vietnam. We cannot convince the NIMH (National Institute of Mental Health) Review Committee that it would make sense for us to look at PTSD in this group because we have these pre-exposure personality measures.

DR. MARLOWE: It is not a biological marker.

DR. SCHLENGER: Right, which is real unfortunate. That points to one of the design weaknesses of the NVVRS which is that it is a retrospective report. We would like to have much more data that was measured prior to exposure but unfortunately that was not possible. It is clear that one of the important next steps for this kind of research is we need some truly prospective studies.

DR. MARLOWE: We are trying to get the Army Epidemiology Board to routinely do some kind of real psychological assessment and profiling of people on a regular basis so that we are able to do realistic prospective studies.

DR. URSANO: Your comments about the PTSD expectations of the female sample, which are largely nurses, dovetails with a piece of the puzzle that Kathy is working on. Dave, you will remember the author of this, I think it was one of our graduate students here. A very nice study was done looking at nurses in intensive care units versus those working in wards. The interesting thing was that those working in intensive care units, in fact, showed less distress than those working on the wards. The issue being that they had much better pay, allowances, and time in contrast to those that were working in the general duty section.

DR. MARLOWE: When was this one done?

DR. URSANO: This was the Army nurse that was here to get her doctorate degree.

DR. MARLOWE: You see there is a real change in ICU's (Intensive Care Unit) from the burnout period of the 1960's with lots of trauma when they lost most of their patients. When they moved into the late 1970's, early 1980's, they started saving most of their patients.

DR. URSANO: This would have been probably about six years ago or so. I think Ed actually has the dissertation on it. My point was, I assume you do not have the data but it would be interesting if you did, where they actually worked and the presence of stress.

DR. MARLOWE: We may, in a study that Bob Stretch and Karen Kerney did of nurses remaining in the service who had served in Vietnam. There were quite a few hundred; that was done about ten or twelve years ago. I would have to ask Bob where the data set is and if the data set is still here.

DR. ROSEN: What were your expectations regarding the third risk factor?

DR. SCHLENGER: We have been thinking about the interpretation of that. For instance, is it a proxy really for exposures of lots of different kinds that are pre-military? In principle, if you think about what other kinds of trauma that people who are less than eighteen-years-old are likely to be exposed to, when you get beyond the auto accidents and that kind of thing, really the main one is potentially abusive relationships with their parents or others; either sexual or physical. It was very enlightening to me to read through interview protocols from our pilot study phase. We did a limited study before we went to the field with the national sample. In looking at the protocols from that pilot study, it became clear to me that the exposure to trauma among people is much greater than I believed. Also, there are lots of different kinds of trauma that people get exposed to in their lives that do not necessarily come to my mind right off. In spite of that, I think that in terms of the likelihood of occurrence, child abuse of one form or another is probably the most likely kind of exposure that a nineteen-year-old soldier would carry with him or her into the military.

DR. ROSEN: As regards your set sample of Vietnam women veterans what do you expect?

DR. SCHLENGER: That is a good question. I cannot remember what the distribution of answers of women is to that and whether it differs from the men. My guess is it is not going to be that much different.

DR. MARLOWE: Well, isn't there a definitional problem given the generality of the question? I have come to feel very strongly that if we are going to deal with trauma we have to start looking at it the way Brown looks at life events. That is very time consuming and very detailed but you need a good taxonomy of balances of the traumatic event.

DR. ROSEN: Have you come across the Bernstein Scale from the Bronx VA (Veterans Affairs)? It was published, I think, in April of last year in The American Journal of Psychiatry. It is a self-report scale on child abuse. It has about sixty items and it was developed on a group of veterans at the Bronx VA who were in treatment for substance abuse.

DR. SCHLENGER: The one I was thinking of actually is a different one but I think the point is well-taken. The assessment of virtually any of these factors needs to be a lot more detailed than it has been.

DR. MARLOWE: I think we also have the additional problem with retrospective reevaluation given the media popularization of the whole concept of victimization and the need to attribute things to events in the past. It makes it a real mess, I will say that. Of your 15% who exhibited symptoms of PTSD, how many were actually dysfunctional as far as feeling pain from the symptoms? I think that is a critical point that we often neglect.

DR. SCHLENGER: I do not think I can answer that directly in terms of proportion. One of the other strong findings of the NVVRS is that, of the 15% or so that have PTSD, the relationship between having PTSD and having trouble in virtually every other aspect of your life is quite strong. The relationship between PTSD and employment, marital problems, and problems in parenting or across a whole spectrum of life circumstances is if you have PTSD you also have these other problems.

DR. MARLOWE: Then comes the next question. What is the proportion of the remainder of the population that has the same problems that you describe?

DR. SCHLENGER: Right, our answer was in looking at both. The NVVRS is a quasi-experiment in which we have theater veterans who served in Vietnam, a matched sample of other veterans, people who were in the military and not in Vietnam which controls for Vietnam service; matched by age, sex, race and a few other things. There was a sample of people who did not serve in the military but could have. The answer is that the Vietnam veterans with PTSD are worse off in all of those; virtually across the board.

DR. MARLOWE: Is drug history the same or different?

DR. SCHLENGER: Yes, my recollection is that the pre-military drug histories are largely the same. The caveat there is that in the pre- 18 or 19 year old drug histories, the prevalence of drug use was very low, at that time.

DR. MARLOWE: Is there any time differentiation in terms of when they served in Vietnam? The observation has often been made that very few of the PTSD cases that came into the VA came in from the pre-Tet era. The majority actually come in from the period in which the war was de-escalated; 1970-1971, when there was very little ground combat but a great deal of other things going on. I wondered what your data showed.

DR. SCHLENGER: Right, we did have a table of the prevalence of PTSD against the year in which you began your service, starting in 1964. It goes up and up until 1969 and then falls back off. I cannot remember what exactly the numbers are but there is a clear spike in 1968 and 1969 and then it goes down.

DR. FULLERTON: Did you look at people who were drafted or control for that? That would have been right about that time.

DR. SCHLENGER: We controlled in the multivariate analysis for whether you were drafted or not and it did not make any difference, which was something of a surprise.

DR. MARLOWE: There is an interesting phenomenon in the draft Army and that is, the highest proportion of behavioral problems and the discharges for behavioral and personality problems came from regular Army enlistees as opposed to draftees. That was almost a rule of thumb from the 1950's on.

DR. SCHLENGER: I should have brought our bibliography. I will send you one.

DR. URSANO: Who won the Pioneer award from the Traumatic Stress Society for the years of work that went into the NVVRS study? There is a major volume, I forget the exact title, Trauma in the Vietnam War or Generation maybe. I think there is also a supplemental volume as well.

DR. SCHLENGER: Yes, the book is two volumes, one of which is mostly text and the other is mostly tables of one kind or another.

DR. URSANO: Both are extremely well done, very thoughtful in terms of their analysis.

DR. SCHLENGER: I will pass on a current publication to Cathy.

DR. URSANO: Bill, what about major depression. I know you also had findings in major depression and generalized anxiety disorder. Those are disorders that do not often have many studies on their relationship to problems.

DR. SCHLENGER: My recollection is that we did find differential prevalence in major depression and, I think, in GAD or panic disorder, or maybe both. Theater veterans were more likely to have those after their service.

One of the things that we're hoping to do in the context of our current framework is look at the notion of whether the PTSD syndrome captures the whole range of sequelae of exposure. That is, is PTSD what happens after exposure or are there other things, for instance, major depression, that is in one way or another independent of PTSD that can also be understood as part of the sequelae?

DR. MARLOWE: What was the prevalence of major depression?

DR. SCHLENGER: That, unfortunately, I do not remember but we do have that. There is a paper from the archives on that issue.

DR. MARLOWE: I am wondering in terms of the findings of the Hopkins study at Baltimore. They found around 8% in the regular population.

DR. SCHLENGER: Right. My recollection is we did some comparisons with findings from the ECA sites against what we had and actually found very few differences in the population, at the group level. However, the group with PTSD was much higher, of course, than all the others.

My recollection is that the finding on major depression for theater veterans as a whole was that it was not higher; but when you looked at the group that had either high exposure or had PTSD, it is much higher. Part of the problem in looking and thinking about theater veterans as a whole is that the amount of exposure to traumatogenic events is not evenly distributed. There are lots of Vietnam veterans for whom nothing of much consequence happened.

DR. MARLOWE: One other question. I do not know if you looked at things like GPA or AFGT scores in their records. The Army policy then was to put the dumber, younger people in the infantry and to preserve the brighter, better-educated people for support jobs.

DR. SCHLENGER: Right. We have AFGT scores from the record. My recollection is that there is a lot of missing data, unfortunately. Also, in the analysis that we did that included that, we did not find much of anything, which was mildly surprising.

DR. TEITELBAUM: Did you measure for any physical symptoms apart from PTSD?

DR. SCHLENGER: We had a whole battery of standard medical self-report items, a list of 20 or 30 chronic conditions. Our finding is very similar to the CDC's finding in that regard, which is Vietnam veterans report more of these physical illness symptoms. When CDC took the next step giving them a physical, they found that many of those differences in self-report did not hold up. That is, they could not find them on physical exam.

DR. FULLERTON: Do you have data on health care utilization among this group?

DR. SCHLENGER: The utilization rate is higher and particularly higher in the long term. There is something, a finding that I have that may well be of interest to you. Among female Vietnam veterans, utilization of health service is quite high, surprisingly, and it is not clear exactly what that is due to.

DR. MARLOWE: Why is that surprising?

DR. SCHLENGER: It was surprising to me in that here is a group of well-educated, healthy women and when you look at them 20 years later, they have all this health service utilization. One factor is they were older to begin with. While the male Vietnam veterans are now in their late forties, female Vietnam veterans are in their fifties and sixties and some are older. If we were to age adjust, that would probably account for lots of it.

The other thing that surprised us was female Vietnam veterans report heavy use of the VA. The conventional wisdom is that women do not go to the VA. Well, some of them do.

DR. MARLOWE: Did you look at that geographically?

DR. SCHLENGER: I do not think that we looked at the utilization geographically. We looked at some of the things by region of the country. I think Rosenheck has, but I do not remember what their finding was.

DR. TEITELBAUM: For what it is worth, in a study that the RAND Corporation did on utilization of various health services by male and female active duty military in the relative peacetime of the 1980's, they found that women differentially used military medicine much more than the males. They were equally healthy people. Perhaps there is something about women using health services and men using, say, recreational or support services.

DR. MARLOWE: It has always been far more socially acceptable for women to seek medical advice and care at levels of symptomatology that men will not seek care for.

DR. URSANO: Is it that women or men with PTSD are higher as well?

DR. SCHLENGER: I am not quite sure whether you were saying the Vietnam veteran is a high health care utilizer or the Vietnam veteran with PTSD, but women, both with and without, seem to be high.

DR. FULLERTON: High compared to non-military women of that same age?

DR. SCHLENGER: Yes.

DR. FULLERTON: And with PTSD?

DR. SCHLENGER: That comparison is harder to make but it seems like it is, yes.

DR. URSANO: One of the obvious explanations for that, though I do not know if you controlled for it, would be worthwhile to look at. Your study and really only one other one that I know of documents that combat injury also increases your risk of PTSD, and arguably, the risk of being a bigger health care utilizer because of that. That finding is so infrequently looked at that it in itself needs to be understood a bit more.

DR. MARLOWE: I think you also have to control for the fact that you have free health care in this population as opposed to proprietary fee-for-service health care in the other population. You need to control for health insurance and all the other things that affect that set.

DR. URSANO: I want to go back for a moment just to the depression idea because it is, to me, an important issue. What were the rates of major depression in women in Vietnam? I think it is true that the rates of major depression were higher for those who were exposed. What were the predictors in women versus the predictors in men and were they different? What was the recovery prognosis, in other words, present versus lifetime prognoses? Were the recovery rates the same?

DR. SCHLENGER: My recollection is that both the lifetime and current prevalence of major depression was higher in Vietnam theater women than civilian. I do not remember whether there was a difference in the ratio of lifetime and current across them. I do not think we ever analyzed this.

DR. FULLERTON: Did age or substance abuse make a difference in that?

DR. SCHLENGER: Since the samples are age matched, that is controlled for but substance abuse is not. I cannot remember what our substance abuse finding was. As I recall, there is very little drug use among any of the women sampled.

DR. FULLERTON: What about alcohol?

DR. SCHLENGER: My recollection is Vietnam veterans were higher in alcohol use.

DR. FULLERTON: Did you look at whether or not they had a family member who also was in Vietnam like a nephew?

DR. SCHLENGER: I know that we did not look at it and I think also we did not ask about it.

DR. URSANO: I thought you were going to ask about the family history of major depression. We found out that there is a subpopulation with or without that family history that are depression-sensitive in exposure to trauma.

DR. SCHLENGER: Yes, our measure of family history is so crude that it would not be worth much. Essentially, we asked them a question or two such as, "while you were growing up did anybody living in your household have a serious problem with their emotions and nerves?" That general kind of question. It is really the crudest measure.

DR. FULLERTON: Did you ask whether they came from military families?

DR. SCHLENGER: No. We do know whether either of their parents was in the military. We have done some analysis of that suggesting that it does not really make much difference. That is kind of at odds with some other analyses.

DR. FULLERTON: You do not know that for the women?

DR. SCHLENGER: I do not know it for the women. We will look at it for the women.

DR. MARLOWE: There is one underlying factor that I do not know what one can do with. For the Army, the period 1969 through 1972 is the period of the highest incidence of psychiatric admission, disposition and evacuation ever reported in the history of the U.S. Army; however, there was very little combat fatigue. The rates were really staggering. They were the highest we have ever seen in the theater. It gives you a matrix of the very high rate of diagnosed mental illness, whether real or not, to begin with.

DR. SCHLENGER: Right.

DR. FULLERTON: That does not necessarily mean it was not that high prior to it. There might be other reasons.

DR. MARLOWE: No, it was not that high prior to it and you can point to the fact if you look at other occurrences. The psychiatric admission and discharge rate for the entire deployment in the Persian Gulf runs about a third of what it would have run during peacetime. Normally, other psychiatric problems go down during wartime and combat fatigue goes up. Vietnam is the exception to that rule.

DR. CARDEÑA: May I ask you something about this subsample where you did your work on traumatic dissociative responses leading to PTSD? I remember that you did an analysis that took account of exposure and sex. Did you also look at the other two items that you mentioned today, ASP and age?

DR. SCHLENGER: I think the answer to that is yes, but I am not really certain. I would have to look back at it. I am glad that you mentioned the dissociation because it is a potential vulnerability that was not included in these analyses that I was talking about that might actually be something of interest to you.

We measured dissociation in a couple of different ways but only measured it in a subsample. We cannot study it in the full group but we can study it. One way in which we measured dissociation was with a brief set of questions about current traumatic dissociation. That is, "at the time of the exposure did you feel like time was slowed down or feel like you were looking down on the scene, et cetera? At the time of some traumatic exposure, did these things happen to you?" We also administered the Dissociative Experiences Scale which is much more a trait-like measure of dissociation, not at any particular time. The analysis that Charlie and Dan did of current traumatic dissociation showed that that was an important factor in predicting who developed prime PTSD. That is, if you recorded that you had these dissociative kind of experiences at the time of exposure, you were much more likely to have PTSD.

In our analysis of the more trait-like measure we also find a strong relationship between scores on this dissociation scale and PTSD. It seems like there is clearly something going on there. It is just not clear exactly what it is. There is something going on there. If I were studying PTSD again today, I would want those measures, I think, to be included.

DR. FULLERTON: Could some of that be mediated by the diagnosis, by the difference between borderline and antisocial personality? I would think that there would be not only reporting differences between those two but it might also be of the dissociative type.

DR. SCHLENGER: My recollection is that, at least on the Dissociative Experiences Scale, the work that Putnam and his colleagues have done on that shows that there is a range in which normal people score. Patients of different kinds usually score higher than non-patients but not as high as some other patients, and the BPD and the PTSD and the MPD score way out at the end. Other psychiatric scores are in the middle but kind of low, more like non-cases than these other.

DR. ROSEN: But couldn't they both be caused by past trauma?

DR. SCHLENGER: Sure.

DR. ROSEN: So the dissociation may not be causing the PTSD?

DR. SCHLENGER: Right.

DR. MARLOWE: Certain kinds of dissociative experience, the sense of looking at a movie and it really did not involve me, are reported throughout World War II as one of the most common coping mechanisms successfully used by people in combat. I think we have to be very careful.

DR. SCHLENGER: Right. One man's dissociation is another man's coping mechanism. It is a factor that we were not able to analyze in the big sample. It seems like a good candidate although it is very much not clear what it actually means.

DR. CARDEÑA: When you look at the distribution of dissociative experiences measured by the DES across ages, it reaches its peak in the teen years and then it declines.

DR. ROSEN: Oh, in the teen years.

PARTICIPANT: The less effective coping using dissociation could be the borderline personality disorders?

DR. SCHLENGER: Right.

DR. MARLOWE: One of the things you are trying to do is defend yourself against the fact that there are a bunch of people out there trying to kill you, which is never very nice.

DR. URSANO: Let me raise another woman-specific issue. Did you look at all at weight change, as in anorexia as a potential outcome?

DR. SCHLENGER: I do not think we even have anything on that because the weight change question ended up on the editing room floor before that. We started out with a mound of instruments about this high which were candidates and after numerous wrestling matches ended up with something that was at least a reasonable length.

DR. FULLERTON: It would be interesting time-wise if you looked at anorexia or weight loss back then and then later; in a way you would be controlling for the cultural aspect. In other words, back then it happened but no one had heard of it.

DR. MARLOWE: Soldiers in combat have been reported as normally anorexic since 1942. They stop eating.

DR. FULLERTON: It is because you have those MRE's (Meal Ready to Eat.)

DR. MARLOWE: No, they just stop eating.

DR. FULLERTON: I would not eat those MRE's, either.

DR. URSANO: You would have the SCID data that would actually relate to the diagnosis around anorexia and including it, right?

DR. SCHLENGER: Right.

DR. URSANO: That data is nowhere else in anybody's data set. It probably is a potential female-specific outcome-related problem. The reason it comes up is that we have had a number of speakers who keep referring back to the issues of weight for military women. Nobody really has a good answer for it. Is it a big problem or a small problem?

DR. TEITELBAUM: One more question about your survey or your documentation. Did you collect data on VA or other disability-type benefits that these people receive?

DR. SCHLENGER: Yes. I started to say something about that a minute ago and got distracted from it. In the survey interview we asked people whether they have a service-connected disability. We also had from the VA the disability compensation file, to identify who is getting something from the VA. Of course, when you match the self-report with the records they do not match all that well. There are people who the record says have a 50% service-connected disability, who tell you in the interview, no, they do not. And vice versa. It was essentially a validity problem because one of the mandates of the study was to look at service-connected disability. The finding was that those with service-connected disability were somewhat more likely to have PTSD but not all that much, which was something of a surprise. I do recall our struggling substantially with this problem of non-matching between the record that they had and the self-report.

MAJ SUTTON: We need to bring the discussion to a close but I would certainly like to thank you, Dr. Schlenger, for contributing to our learning in this area.

DR. SCHLENGER: Thank you. It has been a good experience for me.

Women in the Military

CSM Billie Russell, USA (Ret.)

MSgt Lisa Rogers

HMC Sandra Robertson

This afternoon I would like to welcome three senior NCO's (non-commissioned officers.) We have Command Sergeant Major Billie Russell (Retired) from the Army, Master Sergeant Lisa Rogers from the Air Force and Chief Petty Officer Sandra Robertson.

MAJ SUTTON: My name is Major Loree Sutton. I'm with the Department of Psychiatry here at USUHS and we're part of the group that's been funded to do a grant study on stress, trauma and military women's health.

DR. MARLOWE: I'm David Marlowe, Chief of the Department of Military Psychiatry over at Walter Reed Army Institute of Research.

COL GIFFORD: I'm Colonel Bob Gifford from the Medical Research Materiel Command. I fund grants like this one. I used to work for Dr. Marlowe in Military Psychiatry.

LTC KNUDSON: I'm Kathy Knudson, a research psychologist in Dr. Marlowe's department.

DR. GABBAY: I'm Francie Gabbay, a research psychologist here at USUHS in the Department of Medical and Clinical Psychology.

DR. RADKE: I'm Dr. Alan Radke, Medical Director of Treatment Center in Minnesota.

MS. LEVINSON: I'm Cathy Levinson, a clinical social worker working on the project with Dr. Ursano.

MAJ SUTTON: As part of this study, we've brought in a number of different people like yourselves who have unique perspectives and backgrounds that we're interested in learning more about. We've had over 20 of these consultation sessions to date. In particular, we wanted to bring in some senior non-commissioned officers to learn from your backgrounds and your experiences. Sergeant Major Russell's career started before Sergeant Rogers' and Chief Robertson's who are both still on active duty. With the three of you we have a nice time span that we can learn from.

I have put together three or four questions that I would like to start out with. I would like to pose the questions to you and then get each of your perspectives. Afterwards, I would like to open it up for an informal discussion by the group.

I wanted to find out from you what changes you have observed in quality of life for military service women during the course of your career. Perhaps Sergeant Major Russell can begin.

CSM RUSSELL: I joined the Women's Army Corps (WAC) on Halloween in 1967. I think I was one of the last women on active duty to actually have Women's Army Corps service. There's been a lot of changes in uniforms, expectations and job opportunities. There were basically four fields open to women which were your stereotypical female jobs; not much else was open. The physical fitness requirements have changed substantially, although I think not enough.

The rights and privileges of women have changed. In the early years, for example, my male counterpart could have a family and be entitled to PX (Post Exchange), commissary and health care. As a woman, my spouse could go to the PX and the commissary, however we had to prove 50% disability for husbands for them to use any kind of medical privilege. You could not have children. If you got pregnant, you were thrown straight out. That's all there was to it.

The physical fitness issues including the upper extremity strength and endurance of women were, in my opinion, nurtured rather than corrected or developed. We were not trusted with weapons, essentially. I think that women had some weapon training prior to my arrival. A round went off through the ceiling and that was the end of women having rifles. At the time that I joined, that was the only place that we were trained and we were separated from the men very much.

MAJ SUTTON: I forgot to ask one thing which I would like each of you to do. If you could briefly trace not only when you came into your individual service, but also briefly summarize the assignments that you had on active duty.

CSM RUSSELL: As I said, I joined on Halloween, 1967. I arrived on the 1st of November, and met my first WAC drill sergeant. I wanted to be a medical lab technician and the recruiters wrote down the 91 career field which is medical lab and I did, indeed, become a medic. I went to Fort Sam Houston, where I trained to be a combat medic. We worked in hospitals, but we were not allowed to perform in combat or use our skills in that sense.

I managed to achieve at a certain level in the class and I was selected for the clinical sessions course which is the civilian equivalent of a licensed vocational nurse. I did that. I trained at the Letterman Army Medical Center in San Francisco. Shortly after graduation, I managed to get in enough trouble to be sent to Alaska to cool off. At the time I went to what was called the Specialist Course. I was such a good private, I made private twice; PFC (Private First Class.) Those were the days when the commander could rip your stripe off of your sleeve. However, it wasn't a big deal because once we graduated, of course, Vietnam was on and we were promoted to E-5. We all went from E-3 to E-4 to E-5 and I managed to be in enough difficulty to go to Alaska, which was a wonderful tour. It was terrific. I nursed there. I had worked in the emergency room after graduation and then I worked in pediatrics. Later I became the ward master; general manager of thoracic and neurosurgery. I then became an instructor in the school. After Alaska, I came back and finally made E-7.

Then I was offered a job at Fort Campbell, Kentucky. I had also worked in nursing education and training. One of the nurses knew me and wanted me to come down to Fort Campbell. So I did that. I was promoted to E-8 at Fort Campbell. I was interested in how they were going to manage to house, feed, and educate combat medics, because they were going to virtually double the input of students in that facility and course. They sent me to teach in a combat medical course. I stayed there until I was promoted to E-8, which was just under a year at that point. Then I moved up to the first sergeant position at Fort Sam Houston. I performed the job of physically training, feeding, bedding and otherwise nurturing them so that they could get back over to the instructors and learn the jobs.

I was sent to Korea as a first sergeant and served there for just over a year, with a combat company. I had a small company that was spread out over the entire distance of South Korea. Then I was returned to learn and served as first sergeant in Company B. As a matter of fact, I was MAJ Sutton's First Sergeant. While in that position, I was an instructor, I taught neonatal, newborn nursery, surgery and preventive medicine management. I went off to the Sergeant Major's Academy in 1986 where we had the highest density of women in the class of 251. We had the most women ever; there were nine of us. At that time, there were nine female command sergeants major in the entire Army. There were more E-9's, but not in command or leadership roles.

After I graduated from there, I was promoted to E-9, for sergeant major and command sergeant major. There were two separate lists. I got picked up at the same time for both of them. They sent me to the infantry and my last assignment was with the 7th Infantry Division, Light, Rapid Deployment and it was pretty interesting. I weighed 90 pounds. I became concerned that if I fell over, I would die like a turtle on my back, being well into my forties. It was becoming progressively more difficult to run an 18 year old man into the ground. It was time to make the decision of how much is enough and how much of my body do I want to give up. I decided enough was enough and I retired in 1990.

MAJ SUTTON: Master Sergeant Rogers.

MSgt ROGERS: I've had quite an interesting life. I joined the Air Force in February of 1981, and immediately I was sent to Lackland Air Force Base for basic training. That was about eight weeks of hell. I was then sent to technical school where my specialty was personnel. After doing well there, my first assignment was at Randolph Air Force Base which is the Headquarters Personnel Office for the Air Force. All the top graduates automatically got those assignments; I was one of them.

I was at Randolph for about four years, doing personnel work. After four years, I was sent to Korea for a one year remote tour. I went to Osan Air Base, Korea. It turned out to be one of my best assignments to date. I learned a lot, quick and fast, and saw a little of the real Air Force, I think.

After Osan, I was sent to Washington, D.C. to Bolling Air Force Base and the Air Force Office of Special Investigations. That was supposed to be special duty. I was there for another four years. My only way out was to volunteer to Andrews Air Force Base. I'm presently Superintendent of the Personnel Relocation Section at Andrews. The work involves separation, retirements, formal training and all personnel issues.

HMC ROBERTSON: I came in to the Navy in October of 1979. I went to boot camp at the Naval Training Center in Orlando, after which I went to Great Lakes, Illinois for hospital corps school. I graduated as an E-4. At the time, I didn't realize I had enlisted in the Navy under what they called the Advanced Technical Field. I didn't really understand it. Basically, what it boiled down to was accelerated advancement and then a guaranteed Class C school for advanced training.

After Corps School, I came here to Bethesda Naval Hospital and was assigned as a general duty coordinator. I worked in CCU (Critical Care Unit) for 18 months. During that time, I had to make my choice of which of the advanced schools I wanted to go to. I picked cardiopulmonary because it was related to what I was doing, and I got picked up for cardiopulmonary school. The way the program works, is they say you are guaranteed a school, but not necessarily the one that you want. Luckily for me, I did get the one I wanted.

I stayed at Bethesda for one year of school. After that, I was transferred to the Naval Hospital in Okinawa, Japan. I enjoyed being stationed overseas. It was a great duty station. However, my job assignment was less than desirable. I was unchallenged. I continued to function as a general duty corpsman. I was also working in respiratory therapy. If I had wanted to be a respiratory therapy technician, I think I would have gone to that school. It was kind of frustrating. I had to learn a lot of technical things that I had some theory on, but no clinical practice before I went to Okinawa. I was basically working in a job I wasn't satisfied with. I bounced back and forth between respiratory therapy and the Internal Medicine clinic as a general duty corpsman. I was there for three and a half years. That's where I met my husband and had my first child.

I transferred from there to the Naval hospital in Corpus Cristi, Texas. I was there for five years, and again, was assigned immediately to the Internal Medicine clinic. I functioned as a general duty corpsman. I was very unsatisfied and I felt like my clinical career was going nowhere. By this time, I was a senior E-5. I said "enough is enough." I'm doing the same thing now that I did when I got out of school in '80.

I opted to re-direct my career and went toward administrative roles in the hospital. I started out working in the Quality Assurance Department, everybody's friend I know, and after a year as an administrative assistant and doing record reviews, and committee minutes, I assumed the Credentials Coordinator function at the hospital. I did that for three years and I was promoted to first class, or E-6, during that time. In my last nine months in Corpus Cristi, I felt like I needed to broaden my horizons. They moved me to sick call where I was the senior petty officer; the senior enlisted person in the clinic under a chief. Lo and behold, two weeks later I made chief anyway on my own merits without having had that experience, to everybody's surprise and amazement.

I transferred from there in '91 and came here. I've been here for four years. When I reported to the command, in the interim, I had made chief. I knew I was coming to Bethesda and they were going to expect me to perform as a cardiopulmonary technician, which I hadn't done in probably over five years. I was very leery and apprehensive about going back into clinical work, especially here where everything is so much more advanced than when I had been through school. They said they would train me and I said I could accept that.

When I got promoted, I felt that as a chief petty officer, I was not going to be doing patient care anymore. I convinced them that I needed to pursue being a chief petty officer. I basically assumed charge of the out-patient clinics at the hospital and the medical directorate. I was basically a senior enlisted advisor to the enlisted people in the clinics.

I did that for about five months, as an advisor. After the five months, I assumed the position of Assistant to the Medical Director for Enlisted Affairs and took all the clinics in the medical directorate. I did that for two and a half years. A year ago, I transferred to the Office of the Command Master Chief and I'm his assistant now.

MAJ SUTTON: I would like to open it up for any questions or comments folks might have.

PARTICIPANT: What have been the most stressful experiences that you've had?

CSM RUSSELL: Sexual harassment.

PARTICIPANT: Could you talk about that?

CSM RUSSELL: Well, I actually approached recruiting in Portsmouth, Arkansas. My folks lived there, and there was an E-8. We got things all set up and I had to go through the usual paperwork. He gave me a ride home and attacked me in the front seat of an Army sedan, saying it was his job to make sure that lesbians were not admitted to the Women's Army Corps. That was my first experience and I wasn't even in the military yet. I was a civilian.

In the Women's Army Corps, there were only 10,000 of us (it was an elite corps), and you were stereotypically either a lesbian or a whore. It was one or the other. If you wouldn't put out, then obviously something was wrong with you. I personally was attacked many times. My size probably makes people presume that I'm susceptible and easily managed which is not the case.

PARTICIPANT: Can you go back for a second? Did this kind of harassment go down as your rank went up?

CSM RUSSELL: I was molested by higher ranks. None of which I reported. I have an adversarial relationship with the world and an attitude. You're going to have to deal with me when I'm right. If you report, it's just like in the civilian environment. We're talking back in the sixties now where the woman is immediately criminalized; "you asked for it." You're treated rather badly so it really isn't worth it. You just take care of business another way.

PARTICIPANT: So you never made any formal complaints?

CSM RUSSELL: I never made any formal complaint of sexual harassment. I was forced to make an equal opportunity complaint with my first sergeant. I was an instructor in a school. I got called in to my boss's office and he ordered me to make a complaint because of harassment I had experienced because the students were going to make a class action complaint. This smacked of mutiny and real trouble for the school. So I had to make a complaint. Basically, I dealt with the issue of sexual harassment one-on-one. I have a lot of pride. I do things that may not be smart, but I won't back down.

PARTICIPANT: Is this the major reason for your numerous career moves?

CSM RUSSELL: Actually, I was accelerating. It was kind of an up-or-out thing. People did not really know how to deal with me, so they would either promote me or send me out. What they were trying to do was bear trap me. I received progressively more difficult assignments with progressively more aggressive men which finally got me in the infantry as a female command sergeant major in a deployment unit. I did just fine, thank you.

PARTICIPANT: What was your job there?

CSM RUSSELL: I was the Medical Battalion Command Sergeant Major.

PARTICIPANT: From when to when?

CSM RUSSELL: From '88 to '90, with the infantry. I was with them up through Panama. It was really interesting. Difficult assignments were just fine because it gave me something to chew on. Harassment in Korea was probably the most excruciating event in my military career. When I arrived in Korea, I was a first sergeant to the 2nd Infantry Division and was flatly told they didn't want me. I stayed on what they called a turtle farm for four days. It was a one year tour; you hit the road running. The company that I was assigned to after four days refused to come pick me up, because they didn't want a female. They told me so on the telephone. They told me to get there on my own, which I did. I was just delighted to be there.

PARTICIPANT: This is what year?

CSM RUSSELL: It was '83, '84, '85.

PARTICIPANT: That's pretty recent.

CSM RUSSELL: Yes. I had an interview with the post sergeant major there who wanted me to be a good little girl. He had put another similar female in some sort of Quonset hut that had sewage an inch deep on the floor. She was on the high end of the hut. He wanted me to be a good little girl and not complain about that. While I was sitting and listening to the interview, the man actually got up from his desk and wolf whistled at an E-4 who was walking by his office. He made obscene gestures, so I just got up and walked out. He said he wasn't through with me and I assured him that he was. We kind of had a set-to right then and there. I was not a good little girl.

There were problems with housing. We were not afforded the same housing privileges as the E-7 men. We were not given the same privileges and basically it was very dangerous. In Korea, women are not held in very high esteem by Korean men and the American men were behaving in a manner that they would not behave in at home. I had some go-arounds with a few people. I earned respect through a "don't mess with me" attitude. Most of the women just swallowed it. I just could not do that.

PARTICIPANT: Were you angry all the time?

CSM RUSSELL: I grew up in some very rough neighborhoods.

PARTICIPANT: In Arkansas?

CSM RUSSELL: No, I grew up in bar rooms and brothels in the Pacific Islands during the Korean War. Those were my formative years. I grew up in the streets. I had an adversarial relationship with the world.

PARTICIPANT: Are you from a military family?

CSM RUSSELL: No, my mother was an island hopper who followed the construction battalions. I would tilt the pinball machine. I would knock three or four drinks over and they would keep buying more. There was always fighting because I was the white kid and I was not military. I ran with native people and then there was always proving oneself.

MAJ SUTTON: As long as we're on the topic of sexual harassment, let's ask about your experiences, HMC Robertson, was it a major event, minor event, or non-event?

HMC ROBERTSON: For the most part, I've never had any problems whatsoever. I've never observed it. There was a very small insignificant incident once in Okinawa. I was walking on the ward to do a treatment on one of the patients. One of the corpsmen did one of these whistling sounds. We had this casual "hi, how are you doing" kind of relationship, in passing. He did it once, and I just let it go. He did it again on a separate occasion and I said "we won't have that." That was the end of it. I didn't make a big deal out of it and wasn't shocked or offended. I just said "no, this is not appropriate and I won't have it."

I've heard of women going on a ship where the men don't know how to react with women coming on board. They're opening up a lot more sea duty billets now and they don't know what to do. They're afraid; afraid of what to say or afraid of what not to say. It's just a different world and all of a sudden the men have to stop and say, "wait a minute, there are women around and if we don't watch what we are saying they are going to accuse us of sexual harassment." It's a changing world, I guess, but I haven't had any personal experiences of harassment.

MSgt ROGERS: I have not experienced any outright sexual harassment. I have heard comments when I pass by like "she's looking fine" or something like that. I've seen situations where I've felt like men were probably getting too cordial with younger airmen. I had to step in and put a stop to it. Their comments were inappropriate, but not obscene, just inappropriate in a professional setting. That's the extent to what I've observed.

PARTICIPANT: Did any senior women ever aid you in setting some boundaries on relationships? You're describing an interesting role; the role of a senior woman NCO who helps to set the culture. That senior NCO may or may not do that and may or may not see it as something they ought to do.

MSgt ROGERS: Well, that's one thing the Air Force has stressed; that sexual harassment at any level will not be tolerated. That's one part. Everybody knows if you see that happen, it's incumbent on you to put a stop to it. It's just a way of life really, regardless of your rank. Anybody can correct someone. Sometimes people forget, you have to bring them back.

PARTICIPANT: I was also interested in, this is on a different topic, the experience of being a military woman in another culture. All of you have had overseas experiences. Were the experiences good, bad, or indifferent? What about the cultural experiences?

PARTICIPANT: It depends on where you go.

MSgt ROGERS: When I was in Korea, I was shocked at the way women just did everything for the men. That really shocked me. They expected you as an American to go along with this. That I never got over. I could not understand why the Korean women allowed that to happen. I saw a lot of marriages that got affected because of that. Once the men got back to the states, they had that mentality where they expected to snap their fingers and have things happen. Another thing I observed when I was in Korea was that the men, in particular, were very foul-mouthed. They would just freely say things and use vulgar language.

PARTICIPANT: Korean men or American men?

MSgt ROGERS: American GI's. Probably back in the states they would be more conservative. Their behavior was unchecked. They got away with it; they just lost their minds. I remember the first time I was in Korea, the first day. I really thought these people had lost their minds. I was really shocked. I remember there was this one sergeant who was two ranks above me. I couldn't believe this was the man I knew back at my home base. It was as if he had taken on a different persona. He was a completely different person. He wasn't that family man, that quiet low key person that I was used to. He was just running around. It was really a cultural shock. I still kept my values and maintained them but it definitely had an influence on the situation.

PARTICIPANT: Is this something that you talked about at all, your observations? Did other people have the same observations?

MSgt ROGERS: Oh yes.

PARTICIPANT: Did you talk with any men about it?

MSgt ROGERS: Yes, we were constantly asking, "what's going on? Why all of a sudden this big change?" I remember this young man who came in. The first day he had pictures all over his desk of his wife. Within two weeks, the pictures were gone. We were like "what happened?" He said, "I'm in love with this Korean lady downtown."

PARTICIPANT: Did any of the women change like that?

MSgt ROGERS: You mean the military women?

PARTICIPANT: Yes.

MSgt ROGERS: No. As a matter of fact, they were more afraid of the fellow enlisted men because they weren't sure what kind of communicable disease they might have. That was a big deterrence. They felt, "I'm just going back to the states for my mid-tour leave. I just don't want to have anything to do with these men because you don't know what they might have."

PARTICIPANT: It sounds like with the men there was a typical response to being in a culture; with the women, there weren't any typical kinds of responses. Was there anything that you did differently?

MSgt ROGERS: Not really.

HMC ROBERTSON: The only thing I noticed when I went to Korea once with my husband was that when we went clubbing at night the clubs are geared toward taking care of the men and dancing and the whole nine yards. I just remember one time we went from bar to bar. When we went in this door the women grabbed the men as they came in the door and said, "come sit down, get you something to drink?" I'm six inches shorter than my husband. All of a sudden when they lay eyes on me they're gone. All you get are dirty looks and you are ignored. They don't want to have anything to do with you. It's like you're invading their territory. You're limiting what they want to be doing. Not that anything was going on, we were just sitting there having drinks listening to music. They like to accommodate the men and if an American woman walks in, all of a sudden things are kind of uneasy for them.

PARTICIPANT: Who changes? In other words, in that situation, did they change?

HMC ROBERTSON: They keep on doing what they're doing, but not around you. You know what I'm saying? The party is going on. We're here and they're all out there. That's fine. Anywhere you go overseas, you just have to be ready for anything. It's quite different than in the United States. I was comfortable with that. You just sit there and watch and observe. It's very apparent when you walk in the door and they're like "oops, female, got to go." You just get used to it.

PARTICIPANT: When you say they, who do you mean?

HMC ROBERTSON: The Korean women. The same thing with the Philippines. You don't have it so much in Japan. They're so much more conservative and polite. In Japan, they wait on the men hand-and-foot. It's a very male-dominated society.

PARTICIPANT: I would think there's a number of self esteem issues for women serving in settings where the respect for women is low.

HMC ROBERTSON: I guess. I just never let it get to me. If you stay at home and do whatever you do at home, you don't get out too much and interact with all those people, then it's not an issue. When I was in Okinawa, I felt very welcome. I would interact in a community quite frequently. I think it was much different in Korea and in the Philippines it's worse.

PARTICIPANT: Both of you talked about shock at the change that took place in American males who started behaving more to the Korean model. Did the same thing happen in Okinawa? Did the American men start expecting Japanese-like service from American women?

In the rank ordering of self report on these questionnaires among both men and women, leadership is the highest issue. Morale and logistics were issues while they were over there. The fourth leading issue was stresses of family separation. Generally speaking, all the results which were published in Military Medicine showed a pretty high level of satisfaction with the whole process, and very modest differences between men and women.

I want to touch briefly on some reproductive outcome studies that we are doing. Dr. Thomas, in some broad surveys of Navy women, identified a potential issue for chiefly Naval personnel, which is that there are some adverse outcomes appearing among our younger Navy enlisted personnel. That stimulated some tasking from BUMED. We have subsequently completed an 11 year study of all hospitalizations. I have learned that there is no proper way to do an adverse reproductive outcome study.

One way to start is to look at all reproductive events that were hospitalized. We disallowed spontaneous abortions. We recognize that it is a first step. What we found was that the distribution of outcomes was about 86% live births, about 10% spontaneous abortions, and almost 3% ectopic pregnancies. That is higher than one expects when looking at the National Center for Health Statistics Data on age and race adjusted civilian population. So, we may have a problem with ectopics. These are less than 1% late fetal deaths and less than 1% early fetal deaths. We have no maternal deaths during that 11-year period. This is just a very brief summary. Also the birth weights look like they are about 20% lower than the civilian populations for women in reproductive ages. The ectopic rate was high and we think we may have a particular problem among our very junior women, our E-1's. We are now doing a survey of confirmed pregnancies following up to look in more detail at what may be happening in our personnel exposure. We are very concerned because sexually transmitted diseases (STD's) are related to increased ectopics, and we may be seeing an association between STD's and ectopics. That may be what is driving some of this. We plan to follow this. This has implications for STD prevention, occupational health issues and preventive medicine, including lifestyle issues like smoking.

I want to talk briefly about health care utilization and since Dr. Ursano was plugging books, I want to recommend a special 1994 edition of Military Psychiatry. Dr. Thomas was the special editor for this. We have some very good work in here on sexual harassment in the Navy and the health care utilization study. Dr. Thomas is our "lost time" person, so if anyone has questions about lost time for pregnancy or medical or other issues, she is the person.

In the late 1980's, the Surgeon General became very concerned about issues of how we are able to provide adequate services to women aboard combat logistics support ships; small ships without doctors. To that point, women have largely been assigned for the last quarter century to large tenders; ships that stay alongside port. About three-fourths of our ships do not have doctors on them. They have an independent medical duty corpsman, who is kind of like a medic with some expert training. We were asked to take a look at health care utilization issues and training issues. We developed a model which led the way into the held belief model that a lot of complex multi-determined issues go into health care and health seeking behaviors.

The ship is a beautiful place to do these kinds of studies because you can control access to care and barriers to care, occupations. We had a marvelous opportunity to take a look at this. What we find is similar to what the private sector literature finds, the paradox that women are sicker than men and men die earlier than women. Probably that is due to a lot of factors, but generally speaking, women do have more acute disorders. In all of the countries that collect this data it has been shown that women utilize more health care than men; about one-and-a-half times as much.

In our shipboard studies we found that that is true as well, but the difference in the well-over-risk ratio and the odds ratio between utilization of men and women is reduced, probably because of some selection factors and all the other health belief factors that we control aboard the ship. We find increased utilization, particularly in general urinary issues, where the ratio is five women to one man. Younger people utilize more health care aboard ships, and our women aboard ships are younger. This has implications, of course, for staffing, training, equipment, prevention, diagnostic capabilities, treatment, and evaluation.

Lost time is an issue, of course. We find in the Navy, particularly for lost time, even after looking at medical issues and pregnancy issues, that it is about the same between men and women, similar to what the Army found. Men just lose time in different ways.

In terms of pregnancy, we have some slides on the latest data. The Surgeon General needed to know how many pregnancies would occur if we had so many women on a ship in a complement; a fixed number of how many pregnancies. If we had 100 women, how many pregnancies can we expect in a year?

Well, one way to do that is to say, let's pretend that we have 100 women and that is fixed. When you do that, about 5% of that crew, of that 100, become pregnant each quarter. That is 20% per year. What happens is that when somebody is pregnant, they are transferred off to other rotations. Really, there are a lot more than 100 women that cycle through that ship in a given year period. One way to look at it as 20% is, if you have 100 women, expect 20 pregnancies. However, that is not really the rate of pregnancy. Dr. Thomas has some data.

DR. THOMAS: I work for the Chief of Naval Personnel. The type of outcome variables that they are interested in have to do with separations, absenteeism, and in this case looking at pregnancy aboard ship assignments. How many more people are they going to have to send to that ship to replace people who will be cycled off? Every woman who becomes pregnant will leave the ship by the 20th week of the pregnancy or if the ship deploys. That is our regulation within the Navy. In other words, we know that we have to replace each woman at the 20th week or sooner. The message goes into the Chief of Naval Personnel, this is the date when her 20th week will occur and you should have that replacement there. It usually doesn't work that well.

What we are seeing here is pregnancy losses from ships from 1985 to 1995. The 1995 data have been analyzed. Based on the first five months of 1995 we come up with an annual rate. The message, of course, is that it has gone down; it has really gone down.

HMC ROBERTSON: Most of what we talked about was more like liberty time. I never had any problems with dealing with any Japanese men or anybody, in general, while on duty in an official capacity. It was not any different than being here as far as being at work. I didn't have that problem.

MSgt ROGERS: I felt that Korean men were polite and respectful towards American females because of the attaché that took care of the whole place; they were very polite, always bowing. I remember having a couple altercations where I felt the women were rude; like they would just step on you and keep going. Instead of going around you or saying "excuse me," they would literally just walk on you. The next thing you know you're pushing them and they say something in Korean and you get upset.

PARTICIPANT: Rudeness is a national art form?

MSgt ROGERS: Yes, I remember that happening. I would shake my head and go "they're so rude, I can't wait to leave this country," something like that. That was at a six month point where you just felt you had taken enough of them stepping on you and no courtesy and never saying "thank you."

HMC ROBERTSON: I found that was across the board in Korea. The Koreans treat the Koreans that way. Rudeness is a national art form in Korea. The women treat the women like second class citizens.

PARTICIPANT: How was it when you came back?

HMC ROBERTSON: When I came back, the big difference was that you didn't get all that attention. Surprisingly, when I was in Korea, you got a lot of attention from the GI's because I guess they felt there were just so few there. They were all competing to be a friend with you.

PARTICIPANT: Were you married then?

HMC ROBERTSON: No, I was not married. I got married while I was there.

PARTICIPANT: You got married while you were there. Did that make a difference?

HMC ROBERTSON: Yes. I didn't have any more dates then. Then we stayed home. We finally moved on base. It was just like being in the United States. When I came back to the states, there was no transition at all. I mean I had already settled into married life and had a child. I just went and found a place to live and came to work. Life goes on, there was no transition at all.

PARTICIPANT: Was there anything special about being black?

HMC ROBERTSON: Sort of, and also my height made a big difference. I'm very tall. I remember, I would walk down the street in Korea and the Korean men would come out and look at me. I was like a phenomenon. They would say things like, "soul sister, come here, soul sister." I remember this one Korean man who was trying to learn English. He would say, "honey, honey, honey." That was the only word he could say. It wasn't negative. I didn't take it as being negative. I knew that my height had eyes popping, but I didn't interpret it as being negative. I think it's just something they weren't used to seeing. As a matter of fact, I still haven't been able to get over this one, but one time they thought I was kind of part Korean. I had them asking me that. I could never figure that one out. I don't know what it was.

PARTICIPANT: Let me ask you this question, and really this is partly a survey. Did any of the women you know have troubles with eating problems, eating disorders or anorexia?

HMC ROBERTSON: Over eating.

PARTICIPANT: What's your sense? It's real tough actually to find numbers on it. Do you see as much of it in the military as you see on TV? Do regulations affect eating?

HMC ROBERTSON: Yes. Now they've got the weight program. Right now I have three of my troops, young ladies under 25, that are on the weight program. I really feel for them. They have to lose weight. I feel for them because they really don't eat that much. They're not really overeating and they're constantly at the gym working out. I just can't figure out why they have this weight problem. I feel that the Air Force has been sensitive in that area. They really try. It's not like these individuals just hang out and stuff their faces; they really don't. They actually try to lose the weight. They recently became parents and just gained all this weight and they work out. Right now we've got one individual they're trying to put out because of that. She has failed to pass four of the tests, to lose the weight and the body fat and she's on her fifth. They're getting ready to put her out.

PARTICIPANT: Who decides if it's a problem?

MSgt ROGERS: The commander in the Air Force.

PARTICIPANT: Did those people never have a weight problem in their own head?

MSgt ROGERS: I think for the most part, these individuals always were on the heavy side. Once they became pregnant and had a child, then the weight elevated. For the most part, what I notice is that in the Air Force they're quick to send the male to the hospital to get a body fat waiver or what have you, but they're very reluctant to send the female. As a matter of fact, most of my troops didn't even know that could be done.

PARTICIPANT: What is that?

HMC ROBERTSON: They do some kind of test where they determine that maybe it's your genetic make-up; that you're born to be big.

PARTICIPANT: % of body fat?

PARTICIPANT: They sample your body fat. There are two ways of doing it. One is with displacement of water, the other is with calipers on the flesh. If you don't meet the weight standard, or you can't lose the weight within a given period of time, you receive first a warning and then you are thrown out of the service. That's automatic.

PARTICIPANT: It's really hard for women because of what we're designed to do.

PARTICIPANT: That gets back to a question that I was holding on to, the generational gap. Sexual harassment was more overt in your career. The concern I have is that maybe sexual harassment is becoming more subtle. Maybe this is a form of sexual harassment where you withhold information from the women soldiers in regards to weight standards and possible ways of getting out of the requirements and you inform your male soldiers because you value them. I don't know. I wonder if you have thought about that, whether harassment has become more subtle but is still there. The attitudes are still there, but the overt techniques have disappeared and you have more covert techniques of harassment.

HMC ROBERTSON: I think it ties back more to the good old boy system where you look out for the men. The female is reluctant to go talk to the male who is in charge. I don't see it as a displaced way of dealing with sexual harassment. I just see it where it's harder for the female when there is a male in charge.

CSM RUSSELL: It's changing and it's changing much for the better. There is some covert harassment, but, unfortunately, the men are terrified and it causes problems. In my era, I think sexual harassment was rampant. First off we're talking about the seventies and "flower power." We're talking about a period when a war was going on and a whole lot of people were dying. There was a whole lot of "we don't care, what are you going to do, give my dog tags to someone in Vietnam?"

PARTICIPANT: We've talked about sexual harassment, some of it overseas. I wonder what, other than sexual harassment, did you find the most distressing or stressful thus far in your military careers? What are the things that really ground you down, or are there any?

MSgt ROGERS: The biggest thing with me, and I don't think I'm different than anybody else, military or civilian, is the paper jungle. There is too much work, not enough time, too many interruptions, too many people with problems and they all want your time now. A lot of times, I spend many nights not being able to sleep. I guess I've adjusted to it over time. I just do what I can and don't worry about the rest.

PARTICIPANT: The paperwork and the bureaucracy?

MSgt ROGERS: Yes.

PARTICIPANT: What about failing your patients?

HMC ROBERTSON: Patients, the same thing.

CSM RUSSELL: I grew up to be a fine medic because I had lots of practice in Vietnam with casualties. I still have nightmares. I saw a young man die who had a below the knee amputation. He couldn't handle it. He died of psychogenic shock. Just any number of things. It was pretty gory stuff.

PARTICIPANT: Is it still with you?

CSM RUSSELL: Oh yes. I wake up sweaty and screaming. These were boys. It's part of what caused me to lose my stripe. I took a couple of those guys downtown on Lombard Street in San Francisco. The police escorted us back because we had gone off the track.

PARTICIPANT: In the movies you would get a medal!

HMC ROBERTSON: The big thing with me is where am I going to go next year and to what duty station? Trying to work out my career plan is stressful. My husband is active duty. Are we going to be stationed together or are we going to be separated? We've never been apart or separated as a family for any length of time and my children are probably not ready for that. The option is also available with my husband to retire with 20 years. Then the question becomes what are we going to do next? Not knowing where you're going or what job you're going to have is stressful.

PARTICIPANT: How about separations?

HMC ROBERTSON: I personally haven't experienced that, but I almost did. My husband almost got deployed to Saudi Arabia. I almost was deployed on the USS Comfort. Then again at the last minute they said "no, never mind, you stay." It's very stressful. I think stress is normal for most people who have to deal with making this major shift in a short period of time.

I think most of us are in a mind set where you get up in the morning and you have a routine. We come to work, we go home. Our lives are Monday through Friday and then weekends. Whatever you normally do, there's a set routine. All of a sudden, they say, "well by the way, you are in the military, you're going to deploy, you're going to do this." It catches you off guard. The biggest thing I've had to deal with is to have some of my people deploy and go through it with them; making sure that their family was taken care of and that the administrative things were taken care of. I worried about the people that went to Haiti. I worried for them because they were being exposed to people with tuberculosis and other nasty diseases. I felt, "this is really a shame. They come to work here, now they're going down there. It's going to be a nasty, dirty environment. Who knows who is going to end up being sick." I worried about them in that respect. When they went to the Gulf, yes, I worried about everybody because there was always the fear of the unknown. "When are they going to drop chemicals on these people, when are they going to drop bombs on them?" You didn't know. There were a lot of people over there that I knew. It was a very emotional time; here today, gone tomorrow. Everybody I knew came back.

MSgt ROGERS: For me personally, I haven't had that many deployments and no major separations. Going back to the stress, I wanted to pass something on. As the senior ranking person in my flight I feel like -- once you're perceived as a go-getter, a person that makes things happen -- I am expected to fix things; you get everything thrust on you. That's what I feel I'm experiencing now.

For example, my first sergeant will go on leave for the next two weeks and all of a sudden I'm told I'm acting first sergeant. There are so many other people in the flight. I'm quality advisor, I'm all this and other things as well. We're getting paid to do a job, so why not use everybody? That's a stress. I don't know if it's because of my personality, but I feel it as a female. Most of the other individuals of my rank are mostly male. They're so quick to give me the added responsibility to make these things happen. I think that in that regard, I feel that the males are getting paid the same as I am and I feel some kind of resentment sometimes. I feel overwhelmed that it's all being thrown at me.

PARTICIPANT: How about the dual role of being a mother and a worker?

HMC ROBERTSON: It's quite a challenge. You have to be all things to all people. You get spread thin sometimes. The children don't always understand why you might have to work late. This is true of anyone, whether you're male or female. Why do you have to work late? Why do you have to work weekends? Why are you active duty? They get used to it, but when you are home, you have to really emphasize quality time and doing things with the children.

You've got to be all things to all people at work. Don't dare bring up the fact that you have a family. Have minimal conversation as far as, "I have the kids," but don't get into a discussion of problems. Don't use it as a crutch to get out of work or not be at work. "I have to take my kids to a medical appointment" or "I have to go to the school." Don't get into that routine. You've got to shy away from that. I have the same feelings when I'm at work. If you work for me, I don't want to hear that you have to go to school or a doctor with your child every other day. That doesn't work with me either as a supervisor. When you come to work, you draw the line. You leave your family behind. My husband even says I act differently at work than I do at home. He says when I'm around those people at work, I'm so different. It's a different world, I don't know.

PARTICIPANT: Can you comment on pregnancy?

HMC ROBERTSON: Pregnancy is the same thing. There are, in my opinion, a handful of women who blow this pregnancy thing out of proportion and say "oh I'm sick, I can't do this, I can't do that. I can't stand that." For the most part, it's uncalled for. When you're pregnant, you're not an invalid. You're physically capable of coming to work and doing the job. If your job is one where you would normally be exposed to a dangerous environment, then it's probably advisable to move them out of that environment. In the hospital, I don't think so. We get a lot of women that complain, "I can't be on my feet or I can't work, or can't be at work too many hours." It's not a big deal, just do it.

CSM RUSSELL: Yes, you can be a civilian in two weeks. Being a professional woman, this aggravates me. If you're in the military, you joined to be a professional soldier, sailor, or airman; you made a commitment. I kept applications for McDonalds in my desk. As a first sergeant and a command sergeant major, I would recommend, "you go flip burgers somewhere." If you chose to do this job, then you will do it because some soldier will die if you don't.

MSgt ROGERS: The biggest problem is this handful of women that perpetuate, in my opinion, the stereotype that when they're pregnant, they're worthless. I have come into contact with a lot of men that have these back and knee problems and they're worse off than the pregnant women.

PARTICIPANT: What do you think are the key things that keep you going?

MSgt ROGERS: For the most part, I've been satisfied and comfortable. I haven't been deprived of anything or put in uncomfortable working environments or anything like that. I've been in smaller hospitals. I've had to work a few hundred hours a month in Okinawa. There were some bad times or whatever, but time goes by quickly and you move on to the next thing. I guess it's always been that if you pursue a job that you want, and if you're adamant and prove yourself a good worker, eventually you will be rewarded, either with another job or hopefully an advancement. I feel right now I'm not going to get promoted any more, so I'm running out of steam.

PARTICIPANT: What about you?

HMC ROBERTSON: I guess what keeps me going is getting the recognition at the end; when your boss and his boss and your peers recognize you for the efforts you put in. That keeps me going, as do the challenges. I like challenges, I like to trouble shoot and fix things and help people and that keeps me going. I look forward to retirement in a couple years.

CSM RUSSELL: On the leadership side of the house, there is a difficulty because officers usually rotated very quickly in command. When I was a first sergeant and command sergeant major, I developed a reputation as a trouble shooter. Thus, I was moved frequently once I got into senior grades. An officer had to move every 18 months or two years to make or break his or her career. On the other hand, the NCO was there for four or five years, so I was dealing with burned out NCO's.

I've seen the ravages of war and it's a serious business killing children. I think 18 year olds are still adolescents. It's a serious business. That's why I was a medic. I love soldiers. I think the job can be done and I also believe it can be done better. I think the bureaucracy can be dealt with. We need to get down to business.

PARTICIPANT: One question, should she be looking to retirement?
You're there.

CMS RUSSELL: There is life after the military and yes, you should. This is a difficult experience for me. My name is Billie, okay? Since I retired, I don't go on military posts except very rarely. I rarely carry my ID card. This is the first or the second time in five years that my rank has come up. That's pretty much how I dealt in the military. You've just got to do your job. Retire and do what you want to do. Go to school or follow your dream, whatever that dream is. I'm an artist. I scribble on paper, that's what I do. I live in New Mexico up in the mountains. I love humanity; it's some people I can't stand. I have no tolerance for superficialness. You probably figured that out. I'm pretty much of a loner. I have a base camp right now. I have two different buildings and each building has a separate function and they're all very small.

MAJ SUTTON: Any other questions to wind up our conversation?

PARTICIPANT: I have one quick one. In going to another country, what expectations, if any, do you have, and where have they come from? Were you aware that you were expected to be a certain way or had you heard from other people this is going to be this way for women or just in general?

MSgt ROGERS: The only expectations I had of going to Okinawa were that people said, "that's a terrible place, miserable and nasty; you will hate it."

PARTICIPANT: You as a woman are going to hate it or you as a person?

MSgt ROGERS: Just anybody. You as a person. I had very limited information. You get there and everything is just so different. You pay attention to what they tell you, be observant and eventually you pick it up. It's not that hard to adjust. It's just like transferring from here to California.

PARTICIPANT: Did you feel fear of the unknown?

MSgt ROGERS: Well, initially I did. There were signs on the road. You had to drive on the opposite side of the road. The biggest thing, I guess, in going to Japan was that they're so mild-mannered and polite. We are just terrible nasty people compared to the Japanese. We have very bad habits. One example is men do not take their shirts off in public. You don't take your shirt off to jog on the base or anywhere in Japan. It's common around here. You don't think anything of it. Over there, you don't do that. There are little things like that that people have to get adjusted to. You are not loud and obnoxious in public. I didn't have any problems adjusting because I don't take my shirt off when I go jogging. I'm not loud and obnoxious normally. I just sit and watch and listen. I don't have any problems.

MAJ SUTTON: We've got about five minutes left, I just have one quick question that I would like each of you to address briefly. If you could tell General Shalikashvili anything from your experience about how best to incorporate women in the military, what would it be? Secondly, if you had a group of basic trainees right now, what would you want them to know from your experiences?

MSgt ROGERS: The biggest thing is that everybody, especially women because of the stereotypes and so forth, should perform to the best of their ability. Don't use gender as a crutch, just go full speed ahead and do the best you can. Respect each other. I know we all come from different backgrounds and upbringings; different parts of the country. We just have to accept that and try to get along with each other as best we can. Work side-by-side and do not worry about what somebody else is doing to you or saying about you. Just don't get into that business. We should all work together side-by-side and train together. Watch "Star Trek," they've got men and women working side-by-side and there's none of this nasty business of sexual differences going on. Everybody is equal. I wish we could aim for that. Let's not worry about "he's a man and she's a woman" type of concept. You should get the position or the job based on your ability, what you've done and not who you are.

HMC ROBERTSON: My feeling is that this is an equal opportunity military. Expect to pull your weight, be a professional, and perform the best that you can. If you feel seriously about an issue, then voice it and try to make a change, make a difference. I don't believe in if you're uncomfortable in a situation just letting it pass or it will go away. I feel if there's a deep rooted need to fix it, then do it. Don't expect any special favors because you're a female; pull your own weight. I think the men will treat you the same if you try not to be a crybaby and whine. Demand the best respect from your male counterparts. Don't encourage them once you see they start trying to belittle you as a female. Put a stop to it right away.

PARTICIPANT: In your private personal assessment, do you feel that to prove yourself you have to work harder on assignments?

MSgt ROGERS: Definitely. I feel that I had to pretty much prove that I'm capable, that I can do the job, and that I'm smart enough. It's been like that from day one. I really believe in the Air Force that women definitely have to prove themselves, definitely. That hasn't changed.

CSM RUSSELL: Keep a sense of humor; if I were going to say something general, I would say this. I resent the dual standards for males and females because it's a serious business. We're not changing the weight of the M16 or the weight of the ammunition. I think the standard should be the standard by job. If you can meet the standard, then you can do the job. I don't think sex should be an issue. We are going to have to depend on women in 2010. That's what I would have to say to the Chairman of the Joint Chiefs.

To the soldier coming in, if you want to be a professional woman, see me after class and we will get you a civilian occupation somewhere else. You are a soldier, tell it like it is. Have the courage of your convictions, by that standard. If you don't have that kind of courage, then get out of my way. That's just straight up. That's what I would have to say. Retire. Make way for somebody else.

MAJ SUTTON: Thank you very much. We really appreciate all of you coming today.

DACOWITS: Gender Issues

**CDR Cory deGroot Whitehead, USN
LCDR Martha Gillette, USN**

This morning we're privileged and pleased to welcome CDR Cory deGroot Whitehead, as well as LCDR Martha Gillette to our consultation session for the Defense Women's Health Research Program. By way of introduction, CDR Whitehead and LCDR Gillette are involved with the DACOWITS program, which is the Defense Advisory Committee on Women in the Services. We're going to find out more about that. I could certainly go into much more detail about each of their respective backgrounds, but we've got their CV's on record, so I'll hold on that.

MAJ SUTTON: To introduce ourselves, my name is Loree Sutton. I'm one of the co-principal investigators for our grant studying the relationships between trauma and stress and health in military servicewomen. I'm on the faculty at the Uniformed Services University of the Health Sciences (USUHS.)

DR. GABBAY: I'm Francie Gabbay. I'm a psychologist here and also at USUHS, Department of Medical and Clinical Psychology. I came on board after the project got going, but I'm going to be helping out.

MAJ SUTTON: I can't speak for you. I know nothing about DACOWITS, but I'm very, very interested in what you folks do, and how you do it, and what the issues are.

CDR WHITEHEAD: I think what I'll do is give you an idea of who we are, and how we're organized, and how we're put together. Then I'll pass it to my assistant director, Martha, to talk about issues and how they are developed, and what happens with them once we raise them.

The Defense Advisory Committee is a group of men and women, (most people think it's just women), which was started in 1951 by then Secretary of State George C. Marshall. He elected to put a group together to study at that time, how women could be utilized in the service, and how actually to recruit them. Over the years it has changed its focus somewhat, but it is still a committee that reports to the Secretary of Defense to advise him on the utilization, employment, and equal opportunity of women in the services.

The group, surprisingly, is all civilian, 42 men and women. They are professionals from around the United States who represent all walks of life. A number of them are presidents and vice presidents of companies or deans of universities. We recently took on an Episcopal priest and nun and a construction worker. One owns an Infiniti car dealership. This is a tremendous group of people with a wealth of experience that come in with their own outlook upon the military.

The nomination process is kind of interesting. I'd say there are 42 members, but every year 15 roll off. They commit for a 3 year membership and it's strictly voluntary. The whole committee works twice a year together, but I'll get into that a little further later on. They are selected and nominated by either service secretaries, the services themselves (the five, including the Coast Guard) or Congress. A member who is already on DACOWITS can already nominate people. From the hundreds of nominations that come in every year, 15 get selected. It's really an interesting process to watch that happen.

This year Martha took the hundreds of nominations and built a matrix and tried to get a broad spectrum of occupations and ethnic group diversity. It looks like we've got a real well-rounded group coming in.

There is a chair obviously, who runs the committee, who is selected by the Secretary from one of the members who has been on for two years and has a couple years experience. She, in turn, puts together an executive group of her directors, who lead the other 42 members. Otherwise you've got 42 chiefs. The chair this year happens to be the Vice President of Human Resources from The Des Moines Register, the newspaper in Iowa. Given this background, the committee has taken a new slant this year that is very interesting. This executive group meets quarterly to figure out their plan and processes for developing a team. The essence of what this whole group does, the 42, is basically installation visits. They, in their own time and their own expense (because they are not paid to do this), visit installations in their home areas. They meet in small groups with mostly military women because that's their charter. They meet with officers. They meet with women in different technical skills. They are the eyes, ears, and legs of the Secretary of Defense. They will sit down with a group and say, "If you had five minutes with the Secretary, what are those issues that you would like him to hear?" They hear it all. It runs the range of child care issues to ergonomics or anthropometric issues on how a pregnant woman fits in the cockpit of a helicopter. Just across the board. Over the years the DACOWITS has found that the issues raised by women are really non-gender issues. When you talk about child care and you talk about quality of life, you are talking about issues that affect everybody in the military.

The committee has been divided into three subcommittees, and this is where your area would fit in. The first subcommittee, the brand new one is called Equality Management. It particularly deals with sexual harassment, gender issues, diversity issues, and discrimination issues. The second subcommittee is Forces Development and Utilization. It generally deals with the opening of new positions in the military for women, how women are trained and prepared for these positions, and keeping a watch on that and always listening for new opportunities. The third one is Quality of Life. That is one I mentioned to Cathy, which takes in everything from medical issues and health issues to child care issues, to everything that you can imagine encompasses quality of life. It does mean different things to different people.

These 42 are divided into these 3 subcommittees. When they come to conference twice a year, their collective issues from their installation visits come to the committee's attention. They develop a rank order of the most important issues, because they collect hundreds. They ask, "What are those most important issues that we can invest our time and energy in and really give something to the secretary at the end of the year?"

MAJ SUTTON: So every year the Secretary gets--

CDR WHITEHEAD: Well, the Secretary has said, "This year I'm going to give you guidance. I have a new task force on quality of life, so I want you specifically as a committee this year to look at quality of life issues, to partner with that task force, and to be able to tell me where to spend those important resources that I'm getting."

We are working with Secretary Marsh and the task force to elicit certain questions out there about quality of life issues. The chair reports to the Secretary quarterly. That is what he asks for. They do an end of the year report after the conference. The executive committee of 12 goes on an overseas trip once a year.

These are volunteer members and they are not paid when they do these large conferences and the overseas trip. We pick up room and board and expenses, but they are not paid for their consultant time. One year we go to Europe and the next year we go to the Pacific. We are getting ready in July to do a 14 day trip to Japan, Korea, Okinawa, Hawaii, and Alaska. Last year we met with 3,000 women in a 14 day period; 7 countries in 14 days and many, many bases. It was non-stop. It exhausted the group of us. When you sit down with 3,000 women, you get a feel. You get a real temperature reading for what is going on in Europe, or this year in the Pacific. We come back with a trip report that we give to the Secretary and to the services.

For example, last year the theme was, "We're Downsizing." Peacekeeping missions are up. People are working 12, 14 hours a day, 6, 7 days a week, and they are not complaining about it. They are proud to be in uniform. They are proud of what they are doing. However, their family is not being taken care of, nor their health care needs. Their child care needs, their youth problems, their medical needs in the field for women are not being taken care of. So we can come back and let the Secretary know what the pulse is with women overseas.

MAJ SUTTON: Historically, has there been much variance between what you hear from folks in the Pacific theater versus over in Europe?

CDR WHITEHEAD: Martha, I'll let you answer that. It is dictated somewhat by region, depending on the mission.

LCDR GILLETTE: The issues are slightly different. I'm prepared to answer historically over the last 40 plus years. Over the last decade or so I think some of the things that you've seen fairly clearly are Pacific issues, because the Pacific tends to be further away and less accessible. The Pacific has less history for us. We had ground troops forever in Europe, and large military populations that basically make a small American state in a foreign community. It doesn't work quite the same way in the Pacific, because a lot of our presence is naval forces and naval bases. The great Army oriented shore infrastructure just has not been there as long, and is not as well established. If you look at some of the issues that have more vibrantly come out of the Pacific, they tend to be a lot more of the Oriental derived, sexual entertainment, demeaning harassment kinds of issues. I think in some instances it is fair to say that while we have American communities in both the Pacific and Europe, there is a tendency to pick up local cues and local customs and have to deal with them, even if you don't embody them yourself.

Of course, historically, the Asian and Oriental position of women just hasn't been quite the same as the Western European or as the American. There is a lot of that kind of subtle undertone, and those kinds of problems. The local community just isn't necessarily as supportive. It is easier to forget the lessons that you learned. I'm not intending to be culturally denigrative at all, but just saying these are some of the cultural realities. When you are part and parcel of that environment, it is much more difficult to act the way in which you feel you should act without insulting your host cultures and other kind of things.

I think you find some of the specified gender-related medical problems and the sexual harassment things. You also find the glass ceiling type issues that the Equality Management subcommittee would now be addressing as a little bit more entrenched, and a little bit more pervasive in the Pacific theater than in the European theater. There again, even as expensive as it is in Europe, it tends to be much more expensive in a lot of the places in the Pacific. Some of the housing things, and some of the financial-related problems of trying to maintain a family overseas tend to be a little bit greater.

There are, I think, more unaccompanied billets overseas. Whether you are stuck on this side of it or stuck on that side of it, that certainly is a problem in terms of being unaccompanied for a year, sometimes two years. Some of the Marine Corps billets are two year unaccompanied billets. While generically I think the issues tend to be fairly the same, they perhaps are a little bit magnified, and a little bit more intensive, and a little bit more focused on some of these things in the Pacific theater.

CDR WHITEHEAD: It's interesting too in Europe last year it varied country by country depending on the infrastructure. It was significantly different than in Surrat, Turkey in terms of hospital, medical care, family service centers, social workers available, and medical care in adjoining countries. We found, for example in Germany, not only did the military have a good infrastructure in terms of hospital and treatment, but so did the neighboring countries. We could contract out with civilians. In Turkey, it was a completely different story.

LCDR GILLETTE: I think historically there again, whether you are stateside or overseas, we especially, being the female population within the military, tend to rely much more heavily on what's available outside in the community. This is true whether you are taking a child there for care, or whether you are just fed up trying to wait for an obstetrics appointment or whatever; or it's full and you choose to go off-site. As she says, if you are in Turkey, you probably don't want to go out in town to have a baby.

CDR WHITEHEAD: Or even Naples, Italy.

LCDR GILLETTE: Where I was, I was on isolated duty in La Maddalena, Italy, and they wouldn't even let you think about having a baby on the island. They would send you off to Naples two weeks before you were due. In Naples, everybody was going to Germany. It was kind of a chain reaction. I think that it does, in large part, depend upon the kind of support, the comfort level you have with the local community in terms of what kinds of issues get raised to the forefront as being of critical importance. If you are really concerned about your medical care, you are probably less concerned about some of the more philosophic, or some of the more career-oriented things. It's just like anybody's hierarchy of needs. If you're bleeding to death, you're not so worried about whether or not you're going to get promoted.

CDR WHITEHEAD: Interesting, too, and I mentioned that we have 42 members with diverse backgrounds. A couple of our members are psychologists. We have a criminal psychologist. We have a regional psychologist, one from the University of Akron, who deals with criminal issues, and one local who deals with substance abuse issues. Depending on who you are, and maybe who nominated you, (we have five individuals who were nominated from the White House), you come in with an agenda that's a personal agenda. They all hear different things and see different things, and their sessions will go differently.

I mentioned that we do a sweep through the Pacific and Europe; they don't go in as a group, incidentally. There may be 15 groups going on at once, and each one has a group. They may have a next group and a next group, so in a day's time they really have a collective. They come together with a massive amount of issues, all heard differently, all understood and interpreted differently. It's a wealth of information that they collect.

DR. GABBAY: I can't put this question off any longer. Are these written reports that you do at the end, would we have access to those?

CDR WHITEHEAD: Yes, certainly. Our meetings are always open to the public. Our next conference is in a week and a half at the Sheraton Premier at Tysons Corner. They meet in subcommittees and they'll talk about the issues they have collected. They are open to the public, everything they do. They are run under the Federal Advisory Committee Act, which is a congressional act. It's certainly open to the public.

MAJ SUTTON: Is there anything that's confidential?

LCDR GILLETTE: There's nothing that's confidential. We don't deal with classified information. There are two different kinds of meetings and conferences. There are what we call internal working meetings where the committee will get together and talk amongst itself about things it wishes to promote, or go over internal business and talk about the things that really are of importance only to the committee. Then there are the open working sessions where we receive briefings, or they review written responses to previous requests for information. Do you want me to talk a little bit about this?

I'll start out, perhaps, by supplementing just a little bit of what the Commander said. In addition to the civilian membership, we do have military representatives to the committee. They tend to be the senior staff. You'll have a senior enlisted advisor, or you'll have the head of your Nurse Corps, perhaps. You'll have your senior personnel person, your DCSPER. General Stroup is going to be there.

CDR WHITEHEAD: These DACOWITS members hold a three star status, by the way. That's why they are able to get the commitment and the rank of military representatives there.

LCDR GILLETTE: This is the level of military representation of the committee. They work in tandem. Historically, (historically being the last decade or so), that tandemness has kind of disintegrated a little bit. We're trying very hard to put that back together. What happens with a civilian membership is they don't speak military jargon, and so they tend to ask questions that make a lot of sense to them, that don't make sense to us. Then when we try and answer it, we've given them something completely different than what they asked. We wasted a lot of time in the last few years in asking the wrong questions. The military representatives can really help channel that and focus that. You do have a military/civilian partnership working to identify the trends and to codify the issues. They make sure that the time is best spent in terms of soliciting responses. As a matter of fact, (the commander didn't say this), but the hospital over there (National Naval Medical Center) had a DACOWITS visit this week. If you wandered around the halls over there and asked the folks, I'm sure that you could find several of them who would be able to tell you from a user's perspective what went on. One of our directors of operations was over there conducting a visit herself this week. She did meet with men as well as women, and that's something else that the commander mentioned that I think needs to be emphasized. This January when the Secretary of Defense met with the executive committee he made several things quite clear. One was the partnership with the quality of life task force. One was the fact that especially when we deal with gender neutral issues, the male perspective becomes important because they are users, too. He was, I think, quite clear that talking with men was important, as well as talking with women, yet the focus obviously remains on women.

There are several issues that still remain and will always be primarily women's issues. A lot of that has to do with the medical community and medical issues, and the way in which women perceive their health care to be different than the health care afforded to men; less accessible, less available - just less, I think.

When we come into a conference like this, what happens is a couple of different things. One of the first things that happens is we receive the responses to the questions we asked last time. As the commander said, we have general conference twice a year. That's required by our charter, one generally in April, one generally in October. Last October they asked a bunch of questions. A year and a half ago the committee had about 40 active issues.

Many of those issues had lots and lots of different subparts. The committee has gone through a tremendous amount of evolution this year in terms of reducing that, because that was just too much. They couldn't absorb that. Things weren't coming to closure. They just went through lots of work to reduce that.

Coming out of last fall's conference they had four issues, most of which had a couple of subparts. The requests were reduced ten-fold. We will be receiving the responses to that in this spring conference. Some of them are in briefing, some of them are in written format. They will hopefully bring those to closure, saying, "Yes, we've gotten the information that we need on this. Secretary of Defense, here is our recommendation. We suggest you look at this, we suggest you do this. We suggest you consider that." Then they will be moving on to new issues. Because this is their spring conference, we will do some orientation with the new members to kind of bring them on board and bring them up to speed so they can be more participatory in the process. Then we'll go through the briefings and the old issues. Then we'll look at the results of the installation visits, the results of incidental conversations. The chair for example, does a tremendous amount of traveling, and has calls not only on the Secretary of Defense, but everybody. It's like the whole Pentagon; the commander is gone for days out there, knocking on people's doors.

A lot of interesting things come out of that, obviously, in terms of suggestions for direction, or suggestions of concerns, or just general guidance in terms of, "This is what I feel is going on. Can you affirm this for me? Or can you give me something that will change my perspective on that?"

We have done more installation visits already this year than we did in all of last year (the year being a calendar year, January to January.) There is lots of activity going on out there, and lots of things that are coming in. The other way we get information is by independent inquiry. Now we don't handle individual issues. If you wrote to me and said, "I'm having this terrible problem. I'm getting bad fit reps. I can't get promoted."

MAJ SUTTON: You let the IG (Inspector General) do his job.

LCDR GILLETTE: I would come back to you and say I will forward this on to an appropriate source, but we can't address you directly. However, what I will also do besides sending it out to the IG or whomever, is I will make sure that we retain a copy of your concerns, so that we track trends. That's another way in which we get input, not only things that are raised during installation visits.

When we do the installation visits we also try and filter out the individual personal problems. Well, "I have this problem," versus what is an institutional problem. "We have this problem. The child care center here can't do whatever. Nobody here gets the pap smear results back in less than six months." Those are kinds of things that they are more likely to take on in terms of passing them on as issues than, "I went and the doctor yelled at me," kind of thing.

When they come into subcommittee they will pool this collective information. They will have talked about it before the conference with the military representatives amongst themselves in conference calls and faxing. There is a great deal of activity going on right now. They will then come up with a short list of issues. The executive committee will review those and put it into the perspective of the whole committee. Sometimes you will find an issue that Equality Management will think is their issue, and maybe Quality of Life will think is their issue. You don't want to replicate or duplicate anybody's efforts. The executive committee will try to do this issue managing.

They will go back in and kind of present it to the whole group again saying, "okay you gave us this stuff, here is how we edited it. This is what we're proposing on bringing out of this conference as our current set of issues." They will do whatever kind of yeasing or naying they choose to do on that. Then at the end of the conference you will have recommendations going to the Secretary. You will have, sometimes, some other things such as, for example, statements of appreciation to the service; we asked them to do this and they did it, and, "thanks, that was really quick, because it only took you three months." Then you'll have new requests for information that we will therefore turn around with, and we'll start the whole process over again.

Sometimes issues go on for a couple of conferences if it's a very complex issue. If it is an issue where you have had substantive changes, and the question you asked six months ago has kind of become changed by events or overcome by events, then you might say, "let's redirect our thinking on this." Generally, you try and bring things to closure and ask a new set of questions.

DR. GABBAY: The issues, (like you said they had 40 and then they narrowed them down to 4), the issues are generated out in the field by talking to people. Then the committee also provides the Secretary with a set of recommendations of how to deal with the issues. Those recommendations come from a committee processing of the information they got and their areas of expertise and that sort of thing.

LCDR GILLETTE: One of the advantages, or one of the fundamental reasons why you have advisory committees is because we realize, at least philosophically, that we're insular and that we think about things in a particular way. The professed advantage of having civilians is that they can say, "well, you know in the human resources field we have seen this problem for the last ten years, and here are some of the things we've done to deal with it." From a legal perspective, (because we have a lot of lawyers certainly) these are the kinds of court cases that are going on. These are the kind of decisions that are being rendered, so you really need to sort of think about these things philosophically. They put all that together, and they use the expertise and their own experiential base to come up with recommendations. They are very rarely specific recommendations. Once in a while it happens, for example, the post-partum leave, when we went from 30 days to 42 days. The committee came out and made the recommendation to move it from 30 days to 42 days. It was very specific. The services bought onto that very quickly.

That's unusual. Usually it's more generic. Consider putting women in combat aviation. Not, "Do it now, do it this way, start off with this kind of accent, make sure it happens by -- just do this." Rather, "This is what we recommend. This is what we feel the women are asking for and are ready for, and this is where we think you need to go based on the information that we have, and the census that we have."

CDR WHITEHEAD: Something we have, that you might be interested in, is a summary of recommendations over the last 40-some years. It's not massive, but it shows you the trends even in health care and medical issues. I can show you some of the trends and recommendations that were made.

The issues that don't make it up to a recommendation are still briefed. They are still considered. Every military representative liaison and public person in the room takes them back, and they become issues for the services. They are not forgotten, they are not lost. They go into a category we call "Continuing Concerns," meaning that if a trend comes up again, they get pulled up and they become an issue. I'll send you a copy of that.

MAJ SUTTON: That would be great.

LCDR GILLETTE: I was going to say the other thing that helps perpetuate those kinds of things is that every time an installation visit is done, not only does it come to conference, but it has a written report done on it. The report is then sent to the service. They will say, "This is what was found." For example, the number one visit at Bethesda, here are the kinds of issues. Here is a summary of the sorts of issues that were raised. Some of this is just an information problem. "The word is not getting out." Some of these may be institutional concerns, base or location specific, and some of them are continuing service concerns that we've talked to you guys about in the last 50 Navy installation visits that you might want to do something about. Then very often the services will respond to a specific installation visit. So that's another way that smaller issues or more localized issues get addressed.

MAJ SUTTON: Just as a ballpark figure, about how many installation visits take place on an annual basis?

CDR WHITEHEAD: Forty-two members with a minimum of two per member.

MAJ SUTTON: I'm curious, what were the 4 issues that were boiled down out of the 40 issues last fall? It sounds like that must have been some kind of a meeting.

LCDR GILLETTE: I work a year in advance, so I'm working on next fall. I'm trying to remember. We had coming out of the Quality of Life committee child care as a fundamental issue, everything from infant care to what do you do with your teenagers when they are wandering around after high school. That was their issue of choice, because every place they went, everybody talked to them about it. It didn't matter who they were.

CDR WHITEHEAD: There are families in Europe, for example, on those peacekeeping missions, whose youth were unattended and uncared for. There were no MWR (Morale, Welfare, and Recreation) programs specifically for them back home. "Your teenager's in trouble, we're not putting up with it, they go home and you stay here and continue working." It gets that serious. What a tough way to try to do your military job when you've got a teenager who is lost and finding his own entertainment. So it's a serious issue.

LCDR GILLETTE: The Forces Development and Utilization subcommittee actually came out with one issue that was broken down into lots of little parts. I never have been fairly clear as to what issue was what. They were concerned about the issue of downsizing. That again came from a lot of different sources heavily from the European trip. That is obviously not a gender-specific issue, but they found not only the quality of life type issues, but a lot of women were specifically doing jobs for which they had not been trained; women feeling that they were kind of by default doing the administrative, secretarial and house cleaning kind of jobs. There were some leadership and development type questions in terms of women role modeling in ROTC (Reserve Officers Training Corps) programs; women in the academies in leadership positions. Basically, where are the role models for women? As kind of part and parcel to that, how are we ensuring equity in career enhancing billets? You know, those key jobs we all know we need to have to get where we want to go. Are we making sure that women are getting those jobs? That women are getting them in proportionate numbers?

CDR WHITEHEAD: Another issue from the Forces subcommittee was that, in the last year and a half, we went through tremendous changes in terms of opening positions for women. The committee decided to watch and measure and see if, indeed, those changes we made on paper and in the press and in the news are, indeed, happening in the field. Or if we opened positions and then created a situation where we are not leading people correctly into those positions, but putting them in and causing them to fail without appropriate training and development. It was kind of a watch year too. We've done all this. We're not going to push it open any further until we find out what we've done; and maybe we've gone too far. It was a year of measurement for forces, also.

LCDR GILLETTE: For example, the Deputy Assistant Secretary of Defense is doing an officer pipeline survey where they are DoD-wide (Department of Defense) looking at the progression from ensign to admiral. There again, part of that was this whole, "How are we making sure women get from where they are, to where they need to be?"

The general unrestricted line community in the Navy was another factor in that forces development and utilization thing. The community has changed a lot. The committee had been monitoring that for quite some time.

The Diversity Management, the Equality Management -- they changed the name -- the co-chairs went to the Defense Equal Opportunity Management Institute. I don't know if you are familiar with that at all. It's fascinating. They do all kinds of things. It's down in Pensacola, Florida. It's under an Army colonel commandant. They went through some training down there, and came out of there with a set of diversity questions and diversity issues in terms of empowerment issues. Making sure that those watch words that were used in the equal opportunity field in terms of not just sexual harassment, but creating an environment that was really conducive and empowering and motivating to people. Making sure everybody was appreciated for who they were, and used in the best context. In other words, they took sexual harassment and some of the specific issues that we've been talking about for quite some time now (sexual harassment has been an issue of the committee for over 14 years), and they have built it up a level. The word is out now, people understand sexual harassment is a bad thing and they understand that it is a real thing. Now let's look at moving it up a level in terms of if we educate people and treat them right, and ensure that their contributions are being accepted for what they are, then some of these more symptomatic things won't be going on. That's kind of a vague way of defining what the subcommittee is looking at in terms of fostering an environment that is conducive to doing all these other kinds of things that we want to do.

CDR WHITEHEAD: Their key thoughts were that if you value individual differences, you won't harass. So that's their premise now. When Martha mentions they've been looking at sexual harassment on record for 14 years, they also started to hear feedback in the field and in the fleet about backlash. Maybe we've gone too far in terms of men being afraid to work and speak with women. Walking gingerly and being too careful. Not getting involved in cooperating and partnering because they are afraid to make a mistake. They wanted to measure whether we have gone too far, and let's bring it to a nice balance.

MAJ SUTTON: So that process is still--

CDR WHITEHEAD: That's a brand new subcommittee. They are meeting for the first time in two weeks. They have done a lot of their own training and education. Martha mentioned that the chair goes out and visits with the service secretaries and the service chiefs. She has spoken to them about this idea and these differences in their own programs.

DACOWITS has been kind of a strong hammer behind the services in the last couple of years. Last year even after Tailhook, DACOWITS was important in hammering the services and saying we're not going to let up on this issue; going to the Hill and getting support there, and being serious about it. Then saying, "Okay, you've heard us. You have these programs in place. We're going to watch this for a bit. We're going to watch you and give you feedback on that."

That is happening. Martha mentioned when she makes these visits, that is the source of a lot of our input for how we look at what questions we ask. Just last month we met with General Sullivan of the Army who said, "I have a feeling, and I can't measure this, it isn't scientific, but I am recognizing that spousal abuse is picking up." I have more of this, especially in Europe and overseas. He said, "I think it personally has to do more with military women and civilian spouses and I would like the DACOWITS to take a look at this." We get issues that way, and we kind of add that on to our agenda as we travel and ask those kinds of questions.

LCDR GILLETTE: We try to go into meetings without an agenda. We try very hard to keep an open agenda at the meetings. We also try and make sure that when they go into for discussions, there is some kind of stratification. We don't lump everybody in the room together, because we know that commanders and above have different issues than E-3's and below. We try and stratify the groups that way.

Obviously, you sit down with a group of whatevers and they don't know you, and they're not really sure where you are coming from. You need to have some kind of standard -- and as the commander said, we do have questions that we're kind of trying to feel out answers for. We always go in with questions that are sort of generic, but are at least discussion starting points, and then kind of let things flow. Sometimes people come in with everything they want to tell you. That's not usual, but sometimes it happens. Usually you kind of start out asking some questions, and everybody goes on from there, and wishes there was lots and lots more time.

MAJ SUTTON: How are the service members selected?

LCDR GILLETTE: The military representatives? Which service members?

MAJ SUTTON: Well, at the installation meetings?

CDR WHITEHEAD: We try to cover all the women in the command. It's optional. We hope nobody is ordered to attend, and, in general, they aren't. It is open. It's private. The commander is not in the room. He knows we're not an inspection team. They know we're not an inspection team. Even when we do our reports it is not binding by command. This is the theme and the trend. It will go in the base paper before we get there. There will be an invitation. This time the Secretary of Defense is writing a "Go Ahead" letter to the installation commanders, to the overseas team encouraging them to use the DACOWITS to help themselves.

We've never had any problem filling the rooms. One of DACOWITS' goals is to get more publicity, to be better known. They are finding that the higher levels know who they are, but the younger people in the military don't know what a DACOWITS is, and don't know what they are there for. They are using a lot of means to do this right now. They are trying to use "60 Minutes." They are trying to use CNN. They are trying a number of things. We publish a little directory and we'll leave a couple behind. As a matter of fact, you might pull that out, Martha.

We have a little pamphlet we distribute wherever we go. We give one to every woman or military member we meet with, and there is a back page that tells who we are. There are some fine pictures and a list of who is on the committee. There is a back page with a self-addressed stamp right on it that they can make comments. We'll get these in the mail to our office all the time. Anything they care to have the DACOWITS listen to anonymously, signed, whatever. That's another means where it comes right back to us.

MAJ SUTTON: Do you folks go out to the schools, as well, as far as war colleges and the community?

CDR WHITEHEAD: The academies particularly. Year by year, it's different. It depends on how much travel time the chair has. This year they have decided amongst themselves that they would go out and publicize. Because of their positions and being executives, they are invited to rotary clubs. They are invited to town hall meetings and the partnerships and the Navy rig and all that kind of thing. They are out there this year, and it has almost become a contest, because we have asked them to record their contacts. It is almost one-upsmanship. How many I can get to. They are doing a lot of advertising this year.

In terms of the war colleges we haven't done that. We probably should. There are only six women at the Army War College. It's that way every year. It would be an interesting meeting. They do get to the academies, and that's a real valuable place. They are taking a better look at training. The Army has invited them to fly down with Mr. Lister to take a look at integrated training. Last year General Sullivan took them to Ft. Polk. They get out there in the field. We do field trips. Part of our conference is to get out and do a field trip, and see women in the work place.

LCDR GILLETTE: They go by invitation only. I think that's important to remember.

CDR WHITEHEAD: Last fall we went out on the carrier, "Eisenhower", six hours after it had deployed. Everybody had just kissed their wives and children and everybody good-bye, and they were on their way for six months. We flew out there and joined it. Interestingly enough the DACOWITS members immediately grabbed the women aside and said, "What did it feel like to say good-bye to your little girl?" Basically the women said, "See that man over there? He just did the same thing." It's an education. I think that kind of sums it up. That's the committee.

MAJ SUTTON: Okay, any other questions?

CDR WHITEHEAD: I might mention some of our members have been invited to join research groups. There is a social science institute that also has a very large grant to do research on women's mental health issues. One of our DACOWITS members has become one of that committee. There are several grants going on in town with different medical groups where DACOWITS members have been asked to attend, and one or two of them will fly in occasionally and be part of that group. We are part of a task force. We're part of the Navy Standing Committee on Women in the Services, both civilian and military.

The DACOWITS members, because of their specialties are often pulled out and asked to join groups that look into specific issues. We have a woman who is flying up tomorrow from Florida for a four hour meeting here in town to discuss what she has found out in the field of eating disorders, which is a substantial amount of information that has been given to her. She will pass that on from the committee to this other mental health group that is studying that. They are actively involved in a number of things outside of DACOWITS that are somehow related.

MAJ SUTTON: That would be really useful for us to receive any information you have. For example, Francie is right now working on a collection -- you can tell it better.

DR. GABBAY: Yes, I guess to accomplish our overall goal, which Loree told you about, we've got three or four different prongs. Meeting with people such as yourselves is one of those. We're also putting together a series of chapters in which we hope to summarize knowledge that is relevant to our mission. On the one hand, we want to have didactic chapters that review scientific evidence that might be relevant to women's stress and health. Those won't always be specifically relevant to military issues. We have added a component that we're calling commentary. Since I'm doing one on substance abuse my chapter will review scientific evidence on substance abuse and women. Then we're having a person who has expertise on substance abuse in the military write a commentary. What you are doing is so relevant in terms of telling us what chapters we should have, and who might write commentaries, and what should be in those commentaries.

CDR WHITEHEAD: The only thing that we have that summarizes (which we started just last month), is called the DACO News. It talks about who made what contacts that month. I don't know if that's useful or not. We'll send you a copy of that to see who's on that. Paula Shaw is the clinical psychologist in town, who does substance abuse work.

DR. GABBAY: So at the end of the year you provide a written report to the Secretary?

CDR WHITEHEAD: Right.

DR. GABBAY: Would that be something that we could access? Does it sound like it would be useful?

LCDR GILLETTE: We could throw a collection of things together and send them to you.

DR. GABBAY: Also, my interest was piqued when you said there was a woman coming in tomorrow to talk about eating disorders. That is one thing we sort of tossed around, and we're not sure about.

CDR WHITEHEAD: She has a personal interest in it because she has a family member very involved in that. She is well-educated in the area. People seek her out in the evening and say, -- nurses -- "I've written a study and nobody in the military wants it." She has a whole collection of things that she is having great difficulty finding an audience for. We were headed for Portsmouth to join the mental health conference with the military professionals who said, "Oh, that one's too hot. We're not going to touch that one." So everywhere she turns nobody wants her information. If you're interested, I will certainly pass it your way, because she's a zealot with this. She's very serious about it for both personal and professional reasons.

LCDR GILLETTE: But not overbearingly so. The commander and I were talking about this on the way over, because she does have a plethora of information. Just lots and lots, and good information. Good information in terms of, "I've been studying this on my own for ten years because nobody will listen to me kinds of information." As the Commander said, "nobody wants to touch it."

CDR WHITEHEAD: The response we get is, "Oh, boy." Even the Naval Academy has had a resurgence of problems, but we're not going to put that on the agenda.

DR. GABBAY: So she's a member?

CDR WHITEHEAD: She's a member. She's local. She lives in town here. She teaches at a local high school.

MAJ SUTTON: You know another issue that our team certainly has worked with over the years is studying both military and civilian populations who have been exposed to extreme trauma; whether it be in combat or hurricanes, air crashes or whatever. What do you hear from servicewomen in terms of any particular reactions, responses they have had after being exposed to trauma?

LCDR GILLETTE: I think I'd answer that two ways. I think first of all the types of things we hear don't deal with traumatic injury, whether it be psychic or physical. The types of things we hear are more the, "I've been working 14 hours a day now for 180 days in a row, and my children got sent back, and everything I do gets kicked back to me 4 times. And I'm just tired of it." Just the grinding stress. The stress of the quiet heroine. The person who is out there doing whatever it is that she does. This is more like what somebody would be dealing with than say, "I don't have any overwhelming issue, I'm just tired. I'm tired, and I want to tell you why I'm tired, because I can't make my PT and get my child to the child care and my husband's upset because I'm going off in deployment for six weeks, and he's tired of being home." That's the kind of thing that we are more likely to hear.

What I would say with regard to the traumatic injury is that we find the types of medical concerns women raise most often are OB/GYN care, psychiatric care, and child care in terms of, "these are what I have the most problems being taken seriously with. These are the things that I have the most difficulty accessing. These are the things that I find the most difficult to deal with and to resolve in terms of whether it be access or whether it be co-worker attitude, or whether it be whatever." I think the traumatic things are probably out there, but they would come to us in terms of, "I had a problem and I just couldn't deal with it."

CDR WHITEHEAD: I think the trauma events that we hear are isolated, but they are well after the fact when the service member has lost the battle and they are out and responding to us angrily about sexual harassment or rape or whatever. It is almost so convoluted by that point, it is difficult to decipher what the issue was. They are even out of the military by now, and we get those on occasion.

LCDR GILLETTE: Please remember that we do not deal with individual issues. Generally, unless you happen to be in the Gander crash and there are 300 of you on the airplane or something, it's a lot less likely that that kind of thing would be institutional, would be generic.

CDR WHITEHEAD: I talked with Cathy about the women veterans having an advisory group just like ours, with subcommittees. Dr. Mahler deals with the Vietnam veterans, they deal with Persian Gulf veterans. They deal with a lot of those kind of issues that you are talking about here. I viewed a tape of theirs last night on sexual abuse, eating disorders and sexual trauma. They are very much involved in those kind of issues. You might be interested in meeting with them. They meet just like we do. They have conferences. They have subcommittees. I'm an ex-officio member on their advisory board. They are all veterans on the committee. Three of them are former chiefs of nurses.

MAJ SUTTON: It sounds like there is really a lot of collaboration between your group and other groups who--

CDR WHITEHEAD: Sometimes.

MAJ SUTTON: Anything else that you've got, Francie?

DR. GABBAY: I can't think of anything right now. I wouldn't be surprised if we come up with more questions as we go along.

CDR WHITEHEAD: You'll hear DACOWITS mentioned on G. Gordon Liddy, and you'll hear it in the news. We're controversial at times. Recently one of our members was on "Oprah," dealing with families who had dealt with murder in a military family, and how families deal with it. You'll hear the name occasionally, and now you will remember who we are.

MAJ SUTTON: Super. Any questions you folks have for us?

CDR WHITEHEAD: I don't think so. We wish you well in your endeavor here.

MAJ SUTTON: Well, thank you very much. Certainly whatever packet you can put together, we would love.

CDR WHITEHEAD: We'll put some things together and pass it to you.

MAJ SUTTON: That would be great.

DR. GABBAY: You say it would be appropriate for us to come -- there may be people interested in coming to hear --

CDR WHITEHEAD: We'll put an agenda in there. One of our guest speakers is Hillary Clinton, possibly, and the Chief of the services. The SECDEF (Secretary of Defense) was supposed to come. As we get closer and closer everything becomes relative. We'll throw an agenda in there and let you know, because they are open to the public.

LCDR GILLETTE: If nothing else you might want to come to the Quality of Life committee for networking and face time, and meeting people and saying, "hey, here I am and this is what I do. If you are interested in helping me out."

MAJ SUTTON: Are there meetings held in this area?

CDR WHITEHEAD: This one is at the Sheraton Premier in Tysons Corner. Our fall conference is always away. Our spring one is always in town. Then our quarterly meetings are always here.

MAJ SUTTON: I see. Okay, well great. Thanks so much. I really appreciate it.

Prevention and Management of Musculoskeletal Disorders

Michael Feuerstein, Ph.D.

I want to welcome Dr. Mike Feuerstein today to our group. He is a Professor of Medical and Clinical Psychology, as well as a Professor of Preventive Medicine and Biometrics here at USUHS (Uniformed Services University of the Health Sciences.) He was brought in to develop the new clinical program in the Department of Psychology. In the brief time that he has been here, since January, it is my impression that he has made great strides in developing the program. Essentially, there was none when he came and now there is one.

He started his career as Assistant Professor of Psychology at McGill University and moved on to the University of Florida as Associate Professor. He then became Associate Professor of Psychiatry at the University of Rochester, where he stayed and became a professor. Also, while at Rochester, he founded and directed numerous programs and centers, most recently the Center of Occupational Rehabilitation. His background reflects a strong, programmatic emphasis in the areas of pain and musculoskeletal disorders. It is that area of expertise that we hope he can share with our group today.

DR. FEUERSTEIN: It is a pleasure to be here this morning. The idea here is that this should be an interchange. I can begin by mentioning a couple of preliminary points around the problem of occupational musculoskeletal disorders. The first is its prevalence and the increasing incidence of these disorders and associated work disability.

The disorders themselves pretty much fall into two broad categories, what I call activity-related spinal disorders, which include lumbosacral sprain and strain and degenerative disk disease, and a number of other spinal-related disorders; segmental and stability-related disorders. For the most part, the majority of these problems are the mechanical sprain and strain type. The other broad category when we talk about occupational musculoskeletal disorders are the upper extremity disorders. There are a whole range of those. They tend to fall into two broad categories, tendon-related and nerve-related. These problems have risen considerably over the last decade. They represent something like 15% of all occupational illnesses in 1983 and now they are up to over 62%. In just over ten years, there was really a significant increase. Whether that is a consequence of awareness in reporting or whether it is a consequence of an ever-changing workplace with fewer workers required to do more in less time or some combination of that and a series of unknown factors remains to be determined.

My work and interest in the occupational musculoskeletal disorders really evolved out of my interest in pain in general. When I first came to Rochester, I developed a multidisciplinary pain treatment center, with anesthesiology, orthopedics, oral surgery, physical therapy, and psychiatry. One of the problem areas that we really weren't able to adequately address was the subgroup of work-related team problems, where, typically, the individuals experience musculoskeletal pain that persisted beyond what might be considered a natural healing period and was exacerbated or maintained by the type of work they were doing.

For example, they were exposed to what are considered ergonomic risk factors for some of these problems. Some of the work may have been highly repetitious or involved significant awkward postures or inadequate work/rest cycles or extreme temperatures or some type of ergonomic factor in the work place or unsupportive supervisors or fear of job loss. Some of those psychosocial factors also exacerbate these problems. At any rate, we were attempting to deal primarily with the pain in those individuals. We were able to help them manage their pain more effectively through some combination of bio-behavioral pain management techniques; nerve blocks, medication and physical therapy treatments. Their restoration of function never quite made it to the point where they actually returned to work.

Given that the majority of these cases were actually worker's compensation cases, receiving both indemnity and medical payments as a consequence of some work-related injury, the goal of rehabilitation, at least in relation to the insurance companies, was to really restore these patients to a model of physical capacity that would allow them to return to work, restoring them physically and also psychologically. Despite our best efforts, we couldn't do it. We talked to them about problems at work and we taught them various self-management strategies. This is a subgroup of people that some of you are aware of who actually have difficulties in understanding emotions and drawing links between what is going on, for example, in their family or in their workplace. They have a somatic presentation in symptoms.

Many of these cases actually fall into this category of alexithymia if one believes that phenomenon actually exists. That term is used by Stephanie Oates and others to describe an individual who actually is unaware of their emotions and has difficulty accessing emotions and tends to be very concrete in their thinking. If you think about it, many of these work injured patients have been involved in blue collar work. Many of them actually are very detail-oriented and operational in their thinking and they really weren't too responsive to some of the self-management approaches.

At that time, we started thinking about the factors that are preventing these patients from returning to work and how we could develop a model or a conceptual framework that would drive the development of a whole new approach to dealing with these problems. In the past, either rehabilitation facilities took a straight sports medicine therapeutic exercise perspective and didn't deal with the psychological problems of these patients, or didn't deal with the ergonomic risks that these patients were exposed to, or the workplace supervisor/psychosocial problems. The focus was exclusively on pain and stress management. Then there were other facilities and approaches that just focused on vocational counseling and placement and no one ever really put it together in an integrated format. Before attempting to do that we needed to understand the problem to a greater degree.

Looking through the literature and also actually visiting a number of facilities that focused on one of these approaches or another, we realized that the problem is multiply determined. In order to address a difficulty of occupational musculoskeletal disorders and work disability, a multi-dimensional perspective was needed.

A number of different providers who could evaluate and then intervene around some of these barriers was needed. We put together this multi-dimensional model of work disability that includes the medical status of the individual and their physical capabilities, including such measures as strength, flexibility and endurance - often times, aerobic endurance for the type of work that many of these individuals deal with. There was a subcategory of physical capabilities referred to as work tolerances, which include measures, such as lifting, sitting, carrying, push-pull and so on. These physical capabilities are only important in relation to the work demands and these work demands can be broken down into biomechanical, metabolic and psychosocial.

Lastly, and this is particularly the case the longer the individual is out of work, there are psychological and behavioral resources that include worker traits and some of their characteristics prior to the injury: Were they on time most of the time? Did they get along with their supervisors? How did they actually perform their jobs? We noticed when we actually observed people performing jobs that some people take a very paced, methodical approach and other people are very intense and ballistic with their movements. Worker traits can further exacerbate symptoms or make it more difficult to return to work. Another area is psychological readiness to return to work.

DR. URSANO: Those are both individual characteristics and interpersonal characteristics, as well as approaches to work style?

DR. FEUERSTEIN: Correct. Their psychological readiness includes their expectations of returning to work. One of the best predictors of whether an individual ought to return to work or not is, as one might expect, their expectation as to whether they are planning on returning to work. A simple visual analogue scale, for example, of degree of expectation to return to work on a zero to ten scale is usually a very good predictor of whether an individual returns to work or not. Their expectations regarding that or their expectations regarding their own physical capacity are also good predictors of whether or not they return to work. We ran a study a couple years ago looking at an individual's actual physical capabilities and their expectations of what they can do with regard to some of these worker traits, lifting, in particular. It turns out that their expectation with regard to how much they could lift was a much better predictor of their pre-existing physical capabilities.

DR. URSANO: The issue of expectation of returning to work, was that a predictor even when you controlled for issues of degree of disability, type of injury?

DR. FEUERSTEIN: Yes. That is a very good point, which I will get to in one second.

DR. URSANO: The reason that comes to mind is that in the present readiness posture of the military, the issue of how combat casualties will be managed is changing dramatically. The question of frontline treatment following perspectives developed and applied in community psychology and psychiatry that keep the person close to where they are going to work is switching dramatically to we will, in fact, fly people back to the United States and we will eliminate the probability that they will return. The role of expectation of return, the probability of that and the way in which that interacts with recovery, physically and psychiatrically, regarding a return to work is a hot issue. The forward treatment of keeping the person in their unit is now a fading concept.

DR. FEUERSTEIN: The rationale for that is?

DR. URSANO: It is the mobility of troops, the inability to get people back to their units and the ability to sustain hospitals out in the desert. It is easier to fly them back if they have any significant disorder. That is the debate going on.

DR. FEUERSTEIN: The whole thrust in industry and in the private sector with regard to rehabilitation and management of injured workers is exactly the opposite, to the point where physical therapists and psychologists are actually in the plants; more physical therapists than psychologists. In particular, physical therapists have been hired by General Motors and Ford. A number of other companies both large and small are conducting quick evaluations and active rehabilitation right in the plant, coupled with suggestions for ergonomic modifications to keep people at work. That so-called occupational bonding is there and stays there and is used to facilitate return to work. There are a number of studies in the civilian world that show the longer the person is out, the more difficult it is for them to return to work. For example, there are studies with back cases that indicate if the person is out for twelve months, there is about a 2% chance of return to work.

DR. URSANO: How many?

DR. FEUERSTEIN: Twelve months is a very long time, of course. There is also data to indicate that with the right combination of interventions, you can facilitate a return to work. In people out of work an average of, let's say, eight to twelve months, you can generate anywhere from 80 to 87% return to work in comparison to usual controls or usual care, which is about 40%. The natural history of disability curves can actually be shifted and that is what I would like to talk to you about a little bit now in terms of how that can be done.

DR. URSANO: Do you know John Follansbee? They are developing a rehabilitation program of the Operation DESERT STORM Syndrome people.

DR. FEUERSTEIN: His name is?

DR. URSANO: Follansbee. Another area that you remind me of on the expectation issue, again related to the DESERT STORM question, is not only the expectation of return to work but the question of expectation of being ill or the expectation of injuries. Clearly, all the data presently around the issue of DESERT STORM Syndrome is that there are major components related to the expectation that I should be ill because something happened. The way in which that influences both individuals and groups is of great concern.

DR. FULLERTON: I think along with that about the VA and the issues of PTSD and the problems in the civilian workplace. I was thinking about veterans and where they would go for their compensation - the VA Centers, and some of the issues about psychological or psychiatric difficulties and how that applies. It seems like it would apply to cases of chronic medication use. It seems there is literature on that at the VA.

DR. FEUERSTEIN: We have access now to the Army's Physical Disability Database and Steve has been analyzing some of that in relation to some of these musculoskeletal disorders. We have just started getting into it. For 60,000 cases from 1990 to March of '95, there is a large chunk of those cases from the musculoskeletal category. What is interesting is that we are starting to look at gender differences now, but we have not been able to correct for base rates yet. There are some significant differences but we don't know if they are statistically significant. There are some interesting gender differences by type of job and by type of illness. We want to look at high risk jobs for women and high risk for musculoskeletal. I know that some studies have been done in the area of training injuries.

Getting back to your comment about expectation, there is another characteristic under symptom management, which is the last category under psychological behavior resources that may be appropriate and that is philosophy's concept of "disease conviction." It is a cognitive set where the individual is convinced they have a disease or an illness and they need to find the right physician to diagnose and eliminate it. Of course, those individuals with that strong disease conviction are significant challenges to any rehab effort. So, it needs to be identified early on and dealt with.

We took this conceptual framework and then developed an assessment and intervention approach that identified each of these characteristics in the individual and then targeted intervention based upon their pattern of barriers to return to work. The team included exercise physiologists, physical therapists, vocational counselors, psychologists and occupational physicians. We invited psychiatrists but no one had the time or interest. This wasn't considered classic enough, which it isn't. We saw thousands of cases over the last five years and evaluated them and treated about half of those and ran into thousands of problems. I will just give you a little rundown of some of them and this might have implications for managing these problems in the military.

When these patients did not have a job to return to, it was much more difficult to rehabilitate them and help them along to some kind of functional restoration. Job availability and the need to have some kind of potential vocational activity following rehab seemed to be very important.

The worker's compensation system in the civilian world, and it is a little less so from what I understand in the military, is very adversarial. The minute a person gets injured and makes the decision to stop working, (there is a decision point where a person pretty much concludes that they are not going to work because they are in too much pain and there is too much difficulty in functioning), a whole spiral of activity occurs around the supervisor, around the other members of the company, and the co-workers. The insurance company puts a rehabilitation nurse on the case, often times.

The rehabilitation nurses often times are difficult to deal with, at least from the perspective of the injured worker, where they are pushing return to work. "Well, I don't feel well." "Well, you go back to work and you will feel better once you go back to work." While that actually may be the case for a subgroup of people, it is the attitude and the approach that they take, which is quite adversarial and sort of fuels the anger and frustration that many of these people experience after two or three or six weeks in the system.

DR. URSANO: Was it the presence of compensation or was it the degree of adversarialness or both that predicted difficulties?

DR. FEUERSTEIN: This is just more an anecdotal observation. A recent study from NIOSH indicates that there should be some resources shifted to prevention of work disability, which is very different from prevention of the occurrence of the problem initially. They are not mutually exclusive, of course, but at any rate, part of the Request For Proposal that NIOSH(?) wrote was to actually begin to determine some of these problems that take place once the initial compensation case is opened because it is clinical lore that these problems fuel the disability almost to a greater degree than certainly the degree of impairment. With many of these cases, the relationship between impairment, the medical indices, the physical basis, the pathophysiology or anatomic physiology, or the anatomic basis of the disability is often times not closely related to the level of disability.

These are in both low back and upper extremity type of disorders. The level of impairment may account for 10% of the variance in disability, which makes it, of course, a very interesting problem from a psychiatric and psychological, ergonomic and organizational psychology perspective.

Getting back to the sequence of experiences that these workers go through, they try to fight for care and approval for care. They have the right to medical management and rehabilitation by law, depending on the state for the most part, but, in general, the whole idea of workers compensation is that it is a no-fault system. The worker injures him or herself performing work and following that the employer must compensate the worker for lost wages and medical management.

The indemnity payments are paid, but to try to get medical management is a struggle for many of these people. Insurance companies deny approvals and deny access and then there is the independent medical examination process; these examinations are often times not independent at all. It just depends on, of course, who you go to. The insurance company has its cadre of independent medical examiners. The unions have theirs and the patient groups and advocate groups have theirs. Of course, everyone has a different opinion because there is very little relationship between the apparent disability and the case continues for months and months. Once it gets beyond six or so months, it is very difficult to initiate a return to work without some kind of comprehensive effort, which, again, I think, in some sense at least, indirectly argues for the need to deal with active rehabilitation up front and as close to the workplace as possible. It depends on the injury and the disorder.

The psychological experiences that these patients have very often greatly affect the expectations and likelihood or interest in returning to work. There are studies that have also looked at problems in the workplace and the occurrence of some of these low back episodes and also the likelihood of returning to work. There are many studies to suggest a very strong influence on the role of the supervisor in facilitating return to work. That is just another dimension of this return to work process.

DR. FULLERTON: Have you looked at something like contagion in the workplace? Are there situations where there are a few people from the same job that are experiencing something similar?

DR. FEUERSTEIN: I can give you an example. Years ago, there was an "epidemic" of repetitive motion disorders in Australia. There is this attitude now (and it is only an attitude or a belief) that there is no longer a problem in Australia with upper extremity cumulative trauma disorders. Well, all you have to do is go into any orthopedic clinic or occupational medicine clinic in Australia and there are people there that can't function with their hands because of these types of problems. What they found supposedly is that as this "epidemic" increased, when they changed the law so that individuals were not compensated for these problems, the reporting of it tended to drop. Of course, it dropped because people weren't filing worker's compensation claims, but actually they were still going to clinics and seeing physicians for their problem. With respect to this contagion notion around these kinds of problems, (mainly the upper extremity as opposed to the back), there seems to be some evidence to suggest that work organization factors fuel the exacerbation of these symptoms. There is the NIOSH U.S. West Study. In a study of U.S. West, a telecommunications company in Colorado, they looked at ergonomic and psychosocial factors. They did a very good job of going in and looking at work stations and people's positions; hand positions and so on. They also took measures of job insecurity, perceived work load, job clarity and a number of other work climate and work organizational factors. This work was done by Hales and I think that is published in Ergonomics 1994 or '95; Hales and Sauter, and another group, the folks at NIOSH.

What they found was that the work organization factors were much greater predictors of both occurrence and severity of some of these disorders. So, there is certainly some evidence to suggest that how the workplace responds to the reports of symptoms and how they deal with their workers, coupled with exposure to high repetition, high force, upper posture, seems to play a role in the exacerbation of these problems. Whether it is actual or causal, who knows?

In relation to that I'd like to discuss a case study. Several years ago we were brought in to the National Training Institute for the Deaf (NTID), which is a part of the Rochester Institute of Technology. They had seventy full-time, professional sign language interpreters who were interpreting thirty to forty hours a week, of which thirty of them were actually on some form of disability and worker's compensation. Half of their work force was actually out of work and the production was not getting done. These college students (NTID is basically an undergraduate school for deaf students) were not receiving the services that they needed in order to take the courses to complete their college degree. The dean of NTID was frantic. He didn't know what to do. People were reporting symptoms such as tingling, numbness, pain, and fatigue in their hands, wrists, fingers and so on. The work group as a whole was very upset and this anger and frustration was being communicated to the supervisors, who were also getting frustrated. There were four supervisors that handled different levels of different broad topics in engineering and the arts. They called us in because they knew that we dealt with upper extremity disorders, ergonomics and rehabilitation. We met with them just to get a sense of what they saw as their problems.

Since we didn't know anything about sign language interpreting or the exposure aspects of it (there was maybe one study in the literature), we proposed that we go in there and look at the workplace and look at how they do their work to get a better understanding of the biomechanics of sign language interpreting and also some of the psychosocial aspects. We also recommended having these folks all medically examined in a systematic way to get a sense of what kind of medical problems we are talking about.

We did all that and we noticed that how the person performed the work seemed to differ between those people who had problems versus those who didn't. In a very simplistic way when someone was speaking, they were interpreting. They were people who took fewer breaks to give the same information. We ran a laboratory study to look at this more carefully. We presented a lecture and they interpreted this lecture and we videotaped them and looked for biomechanical risk in terms of repetition and deviations from a neutral position of the wrist; movements away from what is considered a safe work envelope.

Without going into any great detail, the symptomatic group interpreted very differently from those who didn't have problems. They took fewer breaks. They deviated their wrists more frequently than the asymptomatic group, even though they were interpreting the same material. There are things that these interpreters can do, they pre-process information and almost abstract information as opposed to detailing every little word and letter. There is this whole aspect of interpreting, which is called finger spelling, where some people spell every single word. Other people try to just give the feel for the information. The other thing we noticed was that many of these people used the forceful jerky and ballistic type movements. That, in itself, can also contribute to symptoms. We found a relationship between those movements and increases in pain and decreases in flexibility during that work test.

DR. URSANO: Were there personality correlates?

DR. FEUERSTEIN: We didn't find any personality correlates. We thought we would but we didn't.

DR. GABBAY: You mean you didn't find any within the group of sign language interpreters?

DR. FEUERSTEIN: Yes. We weren't really targeting on that as much.

DR. URSANO: You reminded me of a patient of mine, who is a professional dancer. You could predict that she would have a back injury at the time at which she was most feeling like she had to thrust herself through the air and prove herself. With just a little bit of extra effort, she would come in having injured her back.

DR. FEUERSTEIN: There was a very significant increase in anticipatory anxiety prior to interpreting, particularly around what they called high and demanding interpreting sessions, where all of their colleagues were watching. There were some very major biomechanical stresses. The frequency at which they were moving their hands was 4.5 Hertz, which turned out to be something like 56,000 motions in a fifty minute period. That is quite a few movements. Plus, it is not necessarily the movement only. It is the acceleration and the velocities that they were clipping along at. There was certainly a high degree of a lack of supervisor support and limited clarification of jobs as well as a number of organizational things that could be dealt with. The reason why they brought us in was to help them solve their problem, not to study it in detail, but we felt we needed to at least provide some kind of basis for developing a program.

DR. FULLERTON: Were the supervisors also people who signed?

DR. FEUERSTEIN: Yes. They were all professional interpreters. What we did now was pull all this information together and put together a ten session intervention program and we tracked accident rates, indemnity worker's compensation, indemnity payments and medical costs. It is not a controlled study. It is only an uncontrolled group outcome study. It was only on seventy cases, but we have three year follow-up data showing significant drops in accident reports, indemnity payments and modest drops in medical costs.

We also did a lot with the supervisors and trained them on how to recognize these high risk work behaviors and on how to listen to their employees. We set up all sorts of training programs for the supervisors and followed up with them every couple of months, to give them a chance to problem solve and learn how to deal with some of the real difficulties that they had. It was mainly around how to accommodate someone with symptoms and problems and then how to recognize a high risk movement and try to train the person to make these movements in a safer manner.

DR. URSANO: What proportion of your work has been directed at the disorder and what proportion to the interventions?

DR. FEUERSTEIN: My work has been focused on prevention and management. We have spent 70% on the clinical management side in evaluation of the management and 30% on the prevention side. By moving here, I want to reverse it to 70/30. I can fill you in on some of the things we are trying to get up and running now. Before I do, I just want to say that we took that same approach and applied it to an envelope manufacturing organization, where there were also quite a few upper extremity-related problems. A lot of what we did was to train the workers to recognize ergonomic risk factors and to take control basically over their symptoms and their symptom management and, ideally, the prevention of their symptoms. We brought in supervisors to work with them and the union reps and we put together a problem-solving team that did nothing but that. They sat around in an organized way. The first thing we did was give them an overview of the symptoms and disorders and information on factors that contribute to these problems. Then we spent a lot of time on ergonomics and ergonomic factors and recognizing ergonomic factors and teaching them to do workplace audits of these ergonomic factors. Then there was an emphasis on problem solving. They took the Xerox problem solving model and we tracked OSHA (Occupational Safety and Health Administration) and found a reduction in lost work time. We did the same thing with a grocery store warehouse.

None of those things were controlled outcome studies. They were all pre-post studies. They really brought us in to try to help with their problem. We were lucky that we were able to actually measure pre-post in some of these instances. I would like to take a lot of those approaches that we have done on the prevention side and actually test them in controlled studies using large samples of either federal employees or military staff. On the rehab side, we have done controlled outcome studies, which I won't get into right now.

DR. GABBAY: Are there data bearing on vulnerability? Do they suggest any kind of personality or psychological factors that could increase the likelihood that someone will sustain an injury?

DR. FEUERSTEIN: Most of the work has been done on work organizational aspects. The psychosocial piece of this is not so much the psychological nature of the worker as opposed to the characteristics of the work environment even though, obviously, there should be some interaction. There is a reason for that. It goes to, I wouldn't call it scientific bias, but some bias against trying to blame the worker. Whether this is legitimate or not from a scientific point of view, of course it isn't, but there tends to be a bias against labeling workers as somehow psychologically deficient in one way or another. It is really the workplace that is the problem. There could be two dimensions to the workplace. There is the psychosocial dimension and then there is the physical, the psychosocial structures and the physical structures. Those are the ergonomic pieces.

There was one study with upper extremity cases done where they looked at measures of psychopathology. It was a study by Janet Spence, in Australia. She looked at the Eysenck Personality Questionnaire and a number of other classic measures of psychopathology. She looked at upper extremity disorders associated with either work-related exposures or an automobile accident. Those were the two comparisons; one being the notion of, was it work-related and trying to tap into the difference between work-related and some kind of other external source. There were a couple of other control groups. She didn't find any differences in the psychopathology processed groups. That is the only study I know that actually has looked at that.

DR. FULLERTON: As you were talking earlier, I was thinking if you look to see if this is someone who has a history of using medical care, that might be a predictor.

DR. FEUERSTEIN: That is a good point. We just finished. We didn't write it up yet, but we just finished a review of predictors of work disability for low back pain. We looked at twenty studies. We couldn't even do a meta-analysis on this. Those studies looked in a prospective way for factors predicting work disability, not necessarily back pain, but basically predicting return to work or duration, or duration of disability. There definitely are factors there that have been identified as predictors of prolonged work disability, psychological factors like premorbid pessimism. The hypochondriasis on the Minnesota Multi-phasic Personality Inventory (MMPI) was a predictor of premorbid pessimism. I don't remember how it was measured, but that was actually pretty interesting. Depression on the MMPI was related to high levels of pain.

DR. FULLERTON: You can look at school accidents, if you ever have that type of data, predicting that someone who would have a certain number of sick days as they were growing up in school could be a predictor. I think in some ways that is an indication, not necessarily of disability, but of how the person has been taught to handle the situation. In other words, how likely is your mother to say to you, "Ah, you are sick, you can stay home," versus "You are sick, go in."

DR. FEUERSTEIN: That is a good point. There was a study that looked at the questions, "Did you feel sick before your pain problem began? Did you feel sick most of the time?" That was a very significant predictor. What we did was to break those predictors up into workplace factors, psychological characteristics and demographics. Just to give you some examples of the workplace characteristics, the failure of a workplace to accommodate was a good predictor. Not supporting problem-solving in the workplace was a good predictor.

DR. FULLERTON: Did you look at people's perceptions of support? If people sought and believed that they were supported?

DR. FEUERSTEIN: Right. Supervisor support is a key one. Then there are some general characteristics, some preexisting prior history of back pain, of course, but also a prior history of a worker's compensation claim. Being in the upper brackets of worker's compensation payments was another predictor.

DR. FULLERTON: What about history of pain or illness in the family?

DR. FEUERSTEIN: It is interesting you bring that up. People look at it in cross-sectional studies but they never plugged it into a prospective study.

DR. FULLERTON: Or even psychological disorder within the family also. That would be interesting.

DR. FEUERSTEIN: See, most of these come out of orthopedics and, you know, we are lucky to get ten or fifteen of these in there.

DR. URSANO: Are there any studies looking at workplaces that have actually taken the measures prior to the claim for disability?

DR. FEUERSTEIN: Yes, for the development of low back pain and lost time in a short duration. That is the Boeing study. Studies were done at Boeing Aircraft up in Seattle, the author is Stanley Bigos. One of them was published in *Spine* in 1993. Basically, what they did was look at the MMPI, something called the Work Apgar Score; basically, a simple job satisfaction index. They had several thousand workers. They gave them the measures up front and then they tracked them over time. They found that job satisfaction and hypochondriasis were pretty good predictors of loss of work due to low back pain. However, when you look at that study carefully, both of those accounted for 6% of the variance. What is interesting is they also looked at many of the physical measures and the physical measures accounted for nothing. It was surprising, actually.

DR. FULLERTON: Do any of these look at something like spouse abuse or the possibility that in these cases the injury might have come from violence in the family?

DR. FEUERSTEIN: Most of these work-related injuries when they are determined to be a work-related injury, are looked at fairly carefully. Insurance companies and others look carefully and that never really came up as a cause. There was a psychological part of the functional capacity evaluation included in assessment of strength, flexibility, work tolerances, and psychological barriers to return to work and that was about a forty-five minute psychiatric interview. We also gave them the MCMI2 and a number of other psychological measures and then they had a quick vocational screen. Most of the time when they get into the category of work-related injury, because of insurance purposes and so on, it is pretty much the case that it isn't a work-related injury. Motor vehicle accidents are usually ruled out in other sources.

DR. URSANO: Does gender show up as a predictor, appropriately controlled?

DR. FEUERSTEIN: Gender does come up as a predictor when we looked at the prospective studies. A number of us reviewed the literature around predictors of outcome following multi-disciplinary work rehabilitation and in both cases, women tend to do worse. They tend to have longer durations of disability and they tend to not respond as well to these multi-disciplinary work rehabilitation programs.

The problem with all that is that no one knows exactly why. When we listen to these folks, they tell us why. Some possible explanations include supervisors who are "willing to accommodate for Joe but not for me." We also hear, "My husband is working and I have to do all of the things. My husband is working and he never does anything around the house. I have to take care of the kids. I can't get child care and I can't go back to work until I get child care." This child care issue is supposed to be taken care of in part by the rehabilitation process and case coordinators; that tends to be a practical factor.

DR. FULLERTON: Of multiple roles?

DR. FEUERSTEIN: Right. Another thing they tell us is that the demands of these jobs, this is a touchy issue, especially in the military but also in the civilian world, but the physical demands of the jobs are just too much when it is coupled with a disorder. In other words, if someone has a back problem, even if it as simple as a sprain with some degenerative disk disease, and they have to lift forty pound boxes three times a minute, that is a pretty demanding job. Now, you can increase that person's aerobic capacity, which seems to be the most significant weight-limiting factor on lifting capacity; it is not necessarily trunk strength or life strength, it is really aerobic capacity. You increase that person's aerobic capacity so that they are operating at 30 to 40% of maximum aerobic capacity, and they can probably do the job for an eight hour period. Even with that, women tend to report anecdotally as they are being discharged from the program that their work is still too difficult.

DR. URSANO: So, you are saying that there is an interaction between the physical convenience of the job and the presence of the interaction of physical demands of the job by disorder, by gender?

DR. FEUERSTEIN: Right.

DR. URSANO: It is tough to say that in a politically correct way. Let me propose at least one example of that which has been studied. It is about older people who, in fact, become ill. The substantial occurrence of disability that happens afterwards is disproportionate to the type of illness that they had. There is an accelerated process that seems to occur that is age-related, so that if your parent all of the sudden gets a sore throat at age sixty-five and then you notice after that, all of a sudden they have aged this year, that is, in fact, a replicated phenomena that has been seen many times. The idea that something around the issue of fatigue and experience of fatigue that you were referring to, and aerobic capacity and how that might be restored and limited is an interesting idea.

DR. FEUERSTEIN: The other thing to think about on this is not necessarily modifying the individual, but thinking about the job. There are programs involved in redesigning certain jobs in the military.

DR. URSANO: We had a presentation by a man who does all these job design studies looking at what the requirements of each job are. Certainly, the general perception of most jobs, and it seems to be accurate, is they can be done by both genders. The question isn't the job or the requirements, but you throw a new piece into it, which is interesting, given a particular job with a disability.

DR. FEUERSTEIN: Then there is the issue of the willingness of the system to even bother accommodating or whether they will reclassify that person and put them in a different type of job and send them off to another duty station.

DR. FULLERTON: You can also wonder if lack of strength is a disability, the fact that women probably are not quite as strong as men. In other words, given two people where one is a woman (I am thinking of the mortuary work for an Air Force base), there were a few women volunteers and there became an issue about a certain station in the mortuary where the bodies are lifted out of the carrying cases at the very front end. That is a very stressful place psychologically because they are undoing the body bags and don't know what is going to be there.

There became an issue about, "The women shouldn't be here, the women aren't strong enough, they can't do every station." In other words, we all have to be able to support each other, but the women can't do that station because there were soluble bodies and the bodies were heavier. Given two people, typically a woman is not going to be as strong.

DR. FEUERSTEIN: Let's just look at it in relation to this. You are looking at four possible variables and four broad categories of variables and, obviously, there are probably hundreds more, but at least for simplicity's sake, we can break it down to these four areas. What you are talking about in this case is the physical capabilities, work demands, mismatch or discrepancy. The question is how do you deal with that?

First of all, I think what needs to be done (this is something that I think we would like to propose) is to actually look at whether or not this discrepancy between physical capabilities and work demands predicts work disability in the military environment.

DR. URSANO: It has drawn closer to the edge, given that there is a certain reserve capacity for every job, that you may reach the spot in which there is less reserve capacity. You can reach the present requirement, but there is little reserve.

DR. FEUERSTEIN: Right. That is a good point. You need to consider the full dimensions of the job. If it is an eight hour job, an individual needs to work at about 30 to 40% of their capacity throughout that eight hours and if they are working at 60%, they will stop after maybe three hours. Then there is reserve capacity with regard to strength. If they are operating at 80% of their maximum voluntary effort and they are doing a grasping task, for example, for a certain period of time, they need time to recover and that time is much longer than if they are operating at 20% of their capacity.

PARTICIPANT: I was going to say that maybe their problems are further exacerbated by more household tasks or doing more work at home. It seems like it would be the same sort of repetitive tasks that they would do in terms of cooking and cleaning.

PARTICIPANT: There is even a possibility of having a fourth category up there, which would be external demands that would contribute to an individual's work disability.

DR. FEUERSTEIN: Non-work-related?

PARTICIPANT: Well, non-work-related, but something that they end up having to do everyday.

LTC KNUDSON: The number of men in the past have been greater, so the percentage is smaller, but now the percentage of women compared to the number of men is going up. In the past, people could cover each other in different roles, especially heavy lifting. There is so much to do and we need everybody to be able to do it. It is like the women are kind of driven out or the women are saying "Well, we can't stay in. We are going to have to get out because we can't see ourselves staying in for a career because the men aren't accepting us; they are not accepting because they need everybody to do all those tasks."

PARTICIPANT: One of the interesting things I found as a commander is that I tried to work all of my soldiers, gender irrelevant, and I looked at them on the basis of their physical capabilities. What I did and the way I approached it was to say I want you not to attempt to exceed your physical capabilities and if it appears as though what you are going to do is going to exceed your physical capabilities, get someone else to help you. That applied to men and women equally because many of the tasks were much greater than a single man could reasonably do. Yet, we have men who go out there and they say, "You know, I am cool, I can do this, no problem." I rigidly enforced the idea of teamwork.

LTC KNUDSON: When was this?

PARTICIPANT: This was '90 and '91.

DR. FEUERSTEIN: Well, you know, this speaks to the whole issue that we talked about before, which is the idea of problem solving and generating solutions actually at the work site and training people to do that. One of the reasons why we introduced the problem solving method was because people were not coming up with solutions or supervisors weren't listening to people who were coming up with solutions of some combination.

One possibility is that if that bore out and people were actually even leaving because of this added pressure, there are a lot of different ways to do jobs (even though some people feel that there aren't.) Most simple accommodations don't cost anything. You have seen all that data probably, but a thousand companies showed that about 50% of all accommodations cost nothing. What it required was a supervisor and a work group sitting down for half an hour and working out some potential alternatives. People who are doing these jobs day in and day out actually with pain have some pretty good ideas of how they could do it differently and just by opening it up at times and giving them some knowledge and then generating some potential solutions and then dealing with some of it.

What we would like to do is actually determine whether or not some of these factors predict long term disability in the military and whether there may be differential predictors because the next step on that would be to develop some type of prevention program.

PARTICIPANT: When I first introduced the idea of team lifting and things like that, there was a good deal of resistance to it. The way I sold it was by pointing out to them that if a person lifts something by themselves and injures themselves, we lose a whole person. If you have two people lifting one thing, it is now taking two times the people to lift it, but we don't lose anybody. Then you have twice the number of people to do the work.

DR. FEUERSTEIN: This is the last thing I want to mention. One of the reasons for trying to understand these problems is to actually develop programs or prevention efforts that will really be accepted by workers and supervisors. We might want to think about not only what factors you hypothesize might be related to the problem, but what measures can you use that would be less threatening. Especially in the workplace. In the clinic, you can almost get away with it. The workplace is so focused more on normative responses.

DR. FULLERTON: There are a lot of parallels, which is really interesting. These issues of how do you develop training programs once something has happened? How do you come in and help people deal with that? In other words thinking about something like a CBW where something like back pain is hard to objectively measure. It is real strange and if you have something you can't necessarily see, like there isn't devastation all around, how do you go about developing a training program where you let people know what to expect?

DR. FEUERSTEIN: They are not specific type disorders, but are very similar to pain. As you can see, what we tried to do is take it out of the self-report mode and try to measure function. I will drop by and give you a review article on self-report measures of function. Some of those self-report measures are validated against actual observable function, but what the rehabilitation and many of the rehabilitation providers have done is to get beyond self-report and actually measure observable function relative to the types of work that they need to perform.

They are still generic but you can also tie in to very specific work-related functions. Even though they are generic, they don't necessarily very accurately reflect what a person does in a military position, but they are general enough to look at that mismatch between where they are at this point physically and what they need to do, regardless of what their disorder is. It still doesn't deal with the key symptoms of their disorder regarding factors predicting who stays in rehab or who successfully completes a function restoration program. Pain was one of the best predictors of dropout, which in some ways, in retrospect, is not terribly surprising.

Most function restoration programs really try to direct the patient's attention away from pain and focus on function and what needs to be done in order to facilitate return to work. Sometimes if it is not addressed, then also you will have problems. So, it is important not to ignore the symptoms that they came in with because they will let you know that there is a problem in one way or another.

DR. GABBAY: Thank you very much for your presentation.

DR. FEUERSTEIN: Thank you.

Women After Disasters

Carol S. North, M.D.

We are pleased to have Dr. Carol North with us. Carol is Assistant Professor at Wash U. in St. Louis. She is also head of the Consultation Liaison Service there. She has published extensively in the area of disasters and also in the area of somatization disorders. She has a book with Oxford University Press on multiple personality disorders.

DR. URSANO: She has a book that's going to come out in the Cambridge University Press. It's "Somatization and Dissociation." And she has another book with Simon and Schuster that's in the works, soon to come out. So we're pleased to have her with us today. She's also, by the way, the winner of the Braceland Award for the American Psychiatric Association for contributions to public service this year.

DR. NORTH: Thank you. This is St. Louis. I bring you greetings from St. Louis. I'm from the Washington University that is in St. Louis. St. Louis is not unknown to disaster. We experienced the great Midwest floods of 1993. And when that happened, the floodwaters got halfway up the arch steps.

We also sit on the biggest earthquake fault in the country, the New Madrid Fault. I must say that I lived in sometimes a two-story and sometimes a three-story brick house, unreinforced turn-of-the-century. And if the earthquake happens while I'm in bed, the house is going to come tumbling down upon me. So don't look for me if we have the big one at night in St. Louis.

Well, on to business. I've been asked to speak to you today about issues of women after disasters. Basically there's not a whole lot for me to present to you; the systematic study of disasters is a relatively new field, to begin with. And, of course, the interest in studying women separately is also sort of new. The tradition in this literature is not much different from the traditions in other epidemiologic literature, where in past years the results have not been separated by gender. And, as a result, there are really few available data on women in disasters, but there are some. I'm going to present those for you today. And then I'll be presenting some original data from our own studies.

What I did for the literature for you today is I did a MedLine search to look for articles. And I also looked through my files to see what articles I had and thumbed through them. I had a big, big pile of articles like that that I thumbed through to try to find anything on women. And I ended up with a stack about this big. I also took references from reference lists in the articles to look for additional articles. Therefore, I think I've got a relatively complete literature review, but there may be some fugitive literature, literature in books and presentations and stuff that I have missed. But if there are any major studies about women that I've missed, I hope that you'll please politely educate me and help add to our knowledge of disasters in women.

For this talk I've also constrained the subject to community disasters. Lars Weisæth presented some on combat. That's not my area of expertise. So I've not covered that, either combat veterans or war refugees. I'm also confining the discussion today to primary victims, not family members and loved ones of the victims or rescue workers, people like that. I think these other things warrant new discussion. And in spite of the fact that the results are usually not separated by women, it turns out in the studies that did separate them, there's a lot of women in these samples. So there really is opportunity for researchers when they gather this kind of data to look at women separately.

Well, before we turn to disasters, I thought I would review psychiatric disorders in the general population. This is from the ECA study. The anxiety disorders are female-dominant in the general population. These are lifetime diagnoses. Schizophrenia and bipolar disorder are pretty much gender-equal. And then the substance use disorders and antisocial personality are male-dominated disorders. I didn't put somatization disorder on this slide. It's one to two % of the population, virtually all cases being female. When you add up all the diagnoses, males have more current lifetime diagnoses than females. That's because of lifetime alcohol use disorder being present in a quarter of men. If you look at current diagnosis, then men and women are pretty equal.

So you must realize that any time you're dealing with any general population, you're dealing with a lot of endemic psychopathology. One out of any five people would meet criteria for a one-month diagnosis. That's important when you go to look at special subsets of the population, such as disaster victims.

Next I want to review PTSD studies in the general population. There are two salient studies, the one being Helzer from ECA data. Women have more prevalence of PTSD than men. Breslau's population study showed much higher rates than Helzer's, the women being almost twice the rates of men for PTSD in the general population. Among the subset that's trauma-exposed, again you see that women are about twice as prevalent in getting PTSD than men, which suggests it's not the trauma rate that's different. The constant, two times women versus men rate, is equal across the population and among the trauma-exposed.

Well, now I'd like to turn to a review of the actual disaster studies. I found 10 of them. And I'm just going to review them for you by year.

The first is a study of the tornado in eastern North Carolina in 1984. There was a fairly large sample, which had more women than men. And the participation rate was less than half, which is not as good as we might hope for. They went in five to eight months after the tornado in a door to door approach, with the Hopkins symptom checklist and a questionnaire with criteria for PTSD following DSM. And they found that almost two-thirds of the sample had PTSD after this tornado. What you'll see in subsequent slides is a pretty high rate compared to other studies. The other thing that they found is that women and men had the exact same rates, which is in distinction to almost every study that I'm going to show you. And it certainly is different from PTSD in the general population with the women's predominance.

Solomon and colleagues (this is from Lee Robbins' and Liz Smith's data set)--- In 1982, there was a series of disasters in St. Louis within a couple of months. There was dioxin contamination. This is insecticide kind of material that was put in oil that was used to cover dusty roads to keep the dust down that got into the water supply and is potentially carcinogenic. Right after that there was a bunch of tornadoes. A bunch of people discovered radioactive well water in their areas. And then there was an economic problem with a lot of people experiencing layoffs from their jobs. And this is in the Times Beach area. After this, Times Beach got closed down completely - defunct. And it's been controversial ever since what to do with Times Beach.

But now it's a ghost town. And currently the debate is whether to incinerate the dioxin, whether that's going to cause problems in our atmosphere with cancers, et cetera. There was a fairly large sample, 541, with a great completion rate, 84 %. They went in a year to a year and a half after the disaster. Notice they went in at 11 to 19 months, missing the 12-month anniversary, which we know is associated with increased rates, the anniversary reaction. They used the Diagnostic Interview Schedule and the disaster supplement. The disaster supplement is an interview that was designed for this study. And we have continued to use the disaster supplement in all of our studies subsequently. We've got about 1,000 more people from about 8 or 10 different disasters across the country with this same data set.

It basically asks about their exposure to the disaster and how much terror, how much horror, how much loss, et cetera. And we've got a lot of interesting variables to compare with. They didn't find very high rates of anything in this study, actually. They found something like seven % of PTSD. And they compared it with ECA subjects in the general population. And, in fact, some of these people had been part of the ECA study. And they got resampled for this study. So they got to compare before and after rates. But mainly what they found was these events just didn't seem to be all that upsetting. People didn't have much increase in any of the disorders.

Solomon's paper actually split the sample by men and women to look for findings separately. And they found that men had an increase in alcohol symptoms and depressive symptoms. And men were more symptomatic when they had more support network demands and when they had less rewarding marital relationships. Women had an increase in depressive symptoms. They really didn't have an increase in somatization. It turns out that the somatization symptoms they had were more associated with other stressors. They also measured other kinds of life events. So, the somatization symptoms weren't so much associated with the disasters but with these chronic and daily hassles. Also, somatization went up with heavy social support demands of the spouse. They concluded that men are more adversely affected by exposure to the disaster and women are more affected by daily hassles and chronic problems and that in women,

social/marital support may be more of a liability than a support. I am currently finishing up a follow-up study on these people about a dozen years later. Some of them got flooded in the great Midwest floods of 1993. I'm in the final phase of data collection. So I can't tell you yet about what we might find. The other comment that I'd like to make about this study is that it's really important, I think, that they looked at comparing somatization symptoms with the disaster, itself, and with other stressors because they've shown that somatization in this population may be somewhat of an extraneous factor, as opposed to a reactive factor to the event in question.

Then there is Shore's study of the Mount St. Helens volcano eruption, again a big sample, 477, nice participation rate. They went in three or four years after the event with a random household sample. They used the Diagnostic Interview Schedule, which is nice because, as you'll see from my presentation, there are a number of studies that have used the diagnostic interview schedule. And so that makes comparability between studies more helpful. Anyhow, they found high rates of depression, generalized anxiety, and PTSD, particularly among women. In their higher exposure subjects, more than a fourth of the women had PTSD. And that was twice as common as in the men. So they found women more vulnerable to PTSD in this.

The next study I'm going to show you is the Bay area earthquake study in 1989. And this was kind of a simpler study. It was a postal questionnaire, Kaltreider. They mailed a postal questionnaire with the Impact of Events Scale to health professionals. They had a pretty good size, 222. The response rate was 24 %. They did it fairly quickly, two weeks after the event. They found that women were higher on avoidance and intrusion. The discussion of this was something about female role conflicts and demands for nurturance. At home, they were a mother and having demands from their children for nurturance. At work, they were professionals. And people had other demands and role conflicts on them. They thought this was the explanation for the elevated rates for symptoms.

The next one is the Exxon Valdez oil spill in Alaska in 1989, again a pretty big sample, almost 600. They sampled residents from the affected areas. And they had a great participation rate. This one was a year after the disaster. Again they used the Diagnostic Interview Schedule, also the CES-D. They found that women were more likely to have PTSD and generalized anxiety and depression than men. They were all significantly higher with odds ratios of almost one and a half. This was even controlling for age, ethnicity, exposure, and cleanup activities in multivariate analyses.

DR. GABBAY: Are those increased risks for women above and beyond what you would expect --

DR. NORTH: For men?

DR. GABBAY: Yes.

DR. NORTH: No. It was comparing men to women.

DR. GABBAY: Oh, okay. The opposite?

DR. NORTH: Women were more likely to have, almost one and a half more likely to have each of those three disorders than men.

DR. GABBAY: Which they are in general anyway apart from disasters; right, --

DR. NORTH: Right.

DR. GABBAY: -- according to those ECA data you showed us?

DR. NORTH: Right.

DR. GABBAY: Okay.

DR. NORTH: So what we're finding looks like just what we see in the population. Women appear to be more vulnerable to these kinds of traumatic events.

There was the famous Buffalo Creek study. This one, in particular, is a follow-up study 4 years later looking at 121 litigants with a less than 50 % rate of participation. They used the SCID and the Impact of Events Scale. What they found is that women had higher clinical ratings and self-report ratings than men at baseline on everything except alcohol abuse and belligerence, which were higher in men. Men are more belligerent and more heavy drinking.

The married women they found had more psychopathology than women living alone, which is kind of opposite of what you see in the general population, again kind of goes along with Solomon's finding of more social support demands being a liability. Maybe husbands just aren't good for these disaster women. They also found that the reduction in PTSD was greater in women than in men. The women had a 21 % reduction versus in men only a 9 % reduction. It wasn't clear to me when I read the article whether it's simply because the women had more symptoms, so they had greater variability and a further ways to go.

The next study is a study of Chernobyl, 1986. This was a telephone interview study two weeks after the event, 216 Swedish people who were in the predicted fallout areas. And they described a structured interview. The findings were that women were having more negative emotional reactions compared to the men. They were more preoccupied by unpleasant thoughts and feelings. They were more likely than men to change their personal habits, to not go outside, to avoid places or activities that were thought to be more associated with risk. They showed less comprehension and knowledge about the potential dangers. And they also were more likely than men to want to get rid of nuclear power. They didn't know as much about it, but they knew that they didn't like it compared to men.

The next study is one of Three Mile Island, Dew and Bromet. They had a good size sample, 67 mothers who delivered babies within 3 months before the accident and who were living within 10 miles of Three Mile Island. They did four waves of interviews starting at 9 months going up to 42 months after the event. And then they followed up with a questionnaire at 10 years. They had a 41 % response rate for a total of 110 subjects at 10 years. They used the SCL-90 and the SADS-L and a mastery scale. What they found is that a third of the women were considered high to stress. And they had a definition for high to stress. The highest stress was at nine months. And then the stress went down after that throughout the next 10 years. And then it climbed again at the 10-year anniversary, which again is illustrative of the anniversary reaction that we have found to be really powerful in the communities, the disaster communities, that we have gone to. The media gets in and they do a lot of hoopla. And they call up experts and do TV spots and newspaper spots on them. And it kind of helps reawaken these symptoms. In these women high distress was predicted, interestingly, by high income, but low education, which I couldn't figure out exactly why that was. If they had to be evacuated from the area, they were more distressed, which is kind of understandable. Their perceptions were parallel with their distress level. If they perceived the event as more dangerous, they were more distressed. Their coping style was related to distress. If they felt they had little control or reduced mastery over their environment, they were more distressed. And you don't know which way that goes. If you feel like you have no control, it makes you more distressed or if you're more distressed, it makes you feel like you have less control.

DR. CARDEÑA: Do you remember what were the other options for that coping style measure?

DR. NORTH: I think it was directly from the Sense of Mastery Scale. It's how much mastery in general they felt they had. Something that hadn't been looked at in women prior to this study is pre-disaster psychiatric history. That was found to be associated with high distress after this accident, which studies of general disaster populations have suggested this, but now it's been found in women. Social support or their perceived social support was not predictive of their distress. So that goes against the two prior studies showing social support to maybe be a liability for these women.

This is a study comparing a tornado in Pennsylvania and a flood in West Virginia. There are 109 people, a quarter to a half participation. They looked at families who were forced from their homes by these disasters. They evaluated them at 4 months and again at 16 months. And they used the Impact of Events Scale and again the DIS, just the PTSD section from the DIS, but, again, it's kind of nice to note the consistency of use of this instrument, which makes it easier to compare. A quarter of the women had PTSD, which was higher than the rates in men, which was 8%. This sample was only about half women, but 79 % of the cases of PTSD were women. So in this population if you want to look for the most cases, I guess you screen the women first for PTSD. Tornado women were more distressed than their husbands, but that wasn't true for the flood women. And tornado women recovered more slowly than men. But that wasn't true for flood women. So it's not clear why you find that in one sample, but not the other.

The last of the review studies that I want to show you is actually my own work with Liz Smith. This is a study combining the first three disasters that we went to. This is in follow-up to Liz's original work with Lee Robbins and Solomon from the Times Beach dioxin, et cetera, in St. Louis. And this is the first of the studies that I was involved with this team.

We first went to Indianapolis in 1987 to a military plane that had crashed into a hotel. Ten people were killed. We interviewed 46 employees of the hotel. Twenty-nine were at work the day that the accident happened, and 17 were not at work for various reasons. We compared them and found higher rates of PTSD in people who were at work.

Then we went to a mass murder in Russellville, Arkansas that same year. It turned out there was a disgruntled former employee of four businesses who just got mad one day and got in his pickup truck and went to one of the businesses and shot a couple of people pointblank. Then he got back in his pickup truck, changed his hat, went to another business and shot people pointblank. The police were called to the first location. By the time they got there, there were already calls of murdered people at the second location. By then he had already gotten back in his truck and changed his hat again and went to the third location and was shooting people. Then by the time the police were at the second location, they got the call from the third location. He went to the fourth location, changed his hat again, and shot a bunch of other people there and then gave up his gun and waited for police to come. So that was kind of upsetting for people. We interviewed 18 people, 11 employees who were present at the time. And then we compared them with seven people who were not present at the time it happened.

And then the third in the series of disasters we went to was a tornado in northern Florida. We interviewed 42 people from households that were damaged by the tornado. And we've got separate publications on each of these, but the numbers were small enough that I decided to merge the data and look at the combined data to see what I could find. We have a published paper on this, too.

In the combined data set, I found that rates of PTSD were relatively low enough that this dichotomous variable was not predictive particularly among the variables that I wanted to look at, like, for example, comparing women and men. So we looked at PTSD symptoms. The total sample was 106. We had a good participation rate, almost 80 %. We went to each of these disasters within a month of the event and did our interviews. We used the Diagnostic Interview Schedule and again the disaster supplement modified for each site. And, basically, we found a number of things, but pertinent to this talk, we found higher rates of PTSD symptoms in women compared to men. When we did a multivariate analysis and threw in which disaster they were in, the level of exposure (which was significantly associated) and preexisting psychopathology (which was highly associated with PTSD), the significant level of gender drops to slightly nonsignificant.

In the Florida tornado, the one thing people complained of was the loss of their forest. That was kind of a daily reminder of how their community had changed. It was kind of a neat community. There was a lot of community spirit. Red Cross didn't even need to come in. They put up all the people themselves in each other's homes. And it was a tight, religious community. They had very little psychopathology. I think their rates of PTSD were about two %.

This is the summary of findings from these published literature studies, this set of 10 studies that I've shown you:

- Women had more PTSD, more avoidance and intrusion. Remember that because in our original data set, I'm going to show you we have slightly different findings than that.
- Women also have more depression, more generalized anxiety.
- Women may have a greater reduction in PTSD over time.
- Women's recovery may be slower than men's.
- Women's emotional reactions are more negative, more preoccupied with the negative and unpleasant thoughts.
- Women may be relatively more affected by extra disaster factors.
- Somatization may be more associated with extra-disaster factors and heavy social demands.
- Husbands may be a liability, rather than a support.
- Women may be at a higher risk for spouse abuse following a disaster.

(The men had more alcoholism depression and belligerence, which makes you think if men after disasters drink more and get belligerent, you might expect to find more domestic violence. And, if you think about it, the women with more somatization were the ones with more demanding husbands. If these were the husbands who were drinking and belligerent, maybe you can understand why they would have more somatization. And the law of the mating would indicate that women with more somatization might be more likely to pair up with men with these problems. So that might be the explanation for this set of findings.)

I'm just putting together what the literature said were the possible reasons for the differences in the female disaster response. Women have more anxiety and depression in the general population. So it's no surprise that they have this in disasters. And several people in the literature thought women did worse because of their husbands. They cited demands for nurturance, that the men are putting on a female role. And they may be reactive to their spouses' reactions. Well, that's pretty much what there is from the published literature.

DR. URSANO: Am I right, Carol? Based on what you have reviewed up to this point, I don't recall any of these studies were actually a comparison group of non-exposed women compared to a comparison group of exposed women. Are any of them?

DR. NORTH: Except for our studies when we looked at women who were there compared to women who were off-site and there were higher --

DR. URSANO: This is the last one, the combined three, you're talking about?

DR. NORTH: Yes, where they had higher rates of PTSD symptoms in exposed than women who were off-site. I didn't --

DR. URSANO: That's the only one of those studies that actually has a comparison of non-exposed?

DR. NORTH: Yes. Yes, I think so. So you can see that the literature is still pretty rudimentary in looking at women, yes.

DR. GABBAY: If you use the ECA data, there are some problems with that, but just give me a sense of: Do you see higher rates of generalized anxiety disorder and depression among the women and both the women and the men than you would expect just on population basis?

DR. NORTH: Women in disasters?

DR. GABBAY: Right.

DR. NORTH: Yes, I think so. We've got original data from the study that I'm about to present that should be a more definitive answer to that. A lot of the studies --

DR. URSANO: Certainly for PTSD. There's no question about it.

DR. GABBAY: Right. I was wondering for the other --

DR. URSANO: The base rate is so low and then so high in the disasters. But for the other ones, depression, GAD, doesn't --

DR. NORTH: A couple of the studies said that depression and GAD were higher, and I don't remember what was the basis that they made, whether they were just comparing it to known population rates. I think maybe that's what they were comparing to. But, anyhow, we've got some additional data.

Next I want to present a study of a mass murder in Luby's Cafeteria in Killeen, Texas. And in this talk I'm going to focus on what we found in the women. We have a published study. It was published in the American Journal of Psychiatry, January '94, describing this event and the findings. We have separated most of the findings between men and women. So most of what I'm going to say here you should be able to find in that paper.

This study was a series of studies funded by NIMH. Liz Smith was the PI, and I was the co-PI. This funding source allowed us to go to a number of disaster sites. The study design had us go to the disaster site within about a month of the event. Sometimes it was longer because of logistical reasons. Then we would go back at a year, and then we would go back at three years. And so we have assimilated a lot of data.

The first three I've already told you about: the plane crash into the hotel, the mass murder in Arkansas, and the tornado in Florida. Next we went to Killeen, Texas for this study.

Then we returned to St. Louis, to the Clayton Courthouse shooting escapade, where a man in a divorcing couple went around the courthouse shooting people up. He shot and killed the woman and her lawyer and was shooting a judge and just went around the courthouse shooting people.

Then we went to the University of Iowa Physics Department, where a disgruntled Chinese graduate student who failed to win an award went into a conference room and killed the student who had won the award, a couple of the professors, and the chairman of the department, and then ran across campus and killed himself.

Then we went to the Oakland firestorm -- that was a pretty big sample -- and then to the Northridge earthquake. And in the middle of all of that, we returned home to study the Midwest floods.

Anyhow, in Texas this is Luby's Cafeteria. And let me tell you what happened the day of the event. It was October 16th, 1991. It was Boss' Day. Luby's Cafeteria had more than 100 patrons in its dining room at noon. The guy that perpetrated this crime was a man who was angry at women. He plotted this out very carefully. He drove his pickup truck right through the plate glass window to the right of the main entrance. And that's the main dining room. And in doing so, he knocked over a table and injured several people. People thought he had had a heart attack and had come through the window. And so they got up to help him. Well, the guy steps out of his truck shooting people. Immediately it became clear what was going on. Everybody sort of panicked. They tried to hide behind tables. And people smashed a window in the back. A few people managed to escape that way.

The people in the kitchen and in the cafeteria serving line, a lot of them managed to escape through the back kitchen door. But the rest of the people in the dining room proper were trapped because the gunman was pretty much between them and the exits. He went around shooting people in the room at pointblank range. He ended up killing, I think, about 25 people. And it turned out he started shooting preferentially the women and particularly the women who would make eye contact with him. This went on for about 10 or 15 minutes.

Fortunately, police were nearby. They got a call out to police, and the police came. They had a shootout with the gunman right in the middle of the cafeteria. And they injured him with a bullet. And then he disappeared around the corner and saved his last bullet for himself. So the whole thing was only about 10 or 15 minutes, but the EMS and the police came. And they said they had never seen so much carnage in one place. It was just flowing with blood. The descriptions were really, really horrible.

A number of support services were provided for the survivors. And they had mental health professionals from the community appear almost immediately. And they also had longer-term counseling and several large public support meetings. And some businesses, including the cafeteria, provided forums for support groups. So, again, the community was fairly close, and it drew together for this.

Well, this is the sample. We had 136 people: 63 men and 73 women. We decided that we wanted to interview everybody who was directly affected, and that included 83 eyewitnesses, mostly people who were in the dining room proper and who were in the line of fire. We had 19 employees who were pretty much in the back. A lot of them ran out and were safe. We interviewed nine employees who were not at work that day. There was one that we didn't know where he was. We interviewed 18 police officers, including the main 6 that were in the shootout, and a couple of EMT people.

Residents of nearby apartments were also traumatized because injured people who got out the back window who were all cut and everyone came to the apartments looking for help. And so they were traumatized, too.

How we did this is we went to Killeen and we went talking to people. We, also, went to the police station. Initially they were suspicious of us. And after we chatted with them a while, they started getting more friendly with us. By the end of the hour, they were offering us phone services, things to eat, lists, entire police lists of all the victims, and allowing us to contact them directly. It turned out to be a really friendly community.

We assimilated a list of 175 total affected survivors. When we got to following them up, it turned out 10 of them had not really been involved. So that left 165. Of those people, we couldn't locate five of them. That left 160. Of those, 22 refused and 2 more of those who agreed never did manage to complete the interview. That left us with 136 interview completers, for an 82 % completion rate.

The methods are that we tried to interview all directly affected individuals. We managed to get in about six to eight weeks after the event to do the interviews. And we came back 13 to 14 months after the event, missing the honeymoon date so not to have our data affected. Our completion rate at follow-up was 92 % of the originals. We used the Diagnostic Interview Schedule and the disaster supplement. If we have time at the end, I'll share with you a couple of other instruments that we used that we have a little bit of data on as well.

It turns out that there were no differences between men and women in age. They were mostly in their late 30s. Men were slightly more educated than the women, 14 years compared to nearly 23. About two-thirds of both men and women were currently married. The sample was about 80 % white. And I'll tell you about pre-disaster diagnoses in a minute.

We started out by asking subjective questions of how much they felt they had been harmed. More than half of the women felt that they had been harmed a great deal by the disaster -- now, this is index data -- compared to only 25 % of the men. And that's a significant difference. We asked them how much they thought they had recovered:

fully, partly, or not. And

87 % of the women had partly or not recovered compared to 5 % of the men, which was a significant difference. A third of the men had recovered fully compared to only 14 % of the women. Then we asked them how upset they had been: very, somewhat, or not very upset. Most of the people said they were very upset, women being significantly more upset than the men.

Now I want to show you rates of individual symptoms. This bears on some things that were being discussed this morning. The most prevalent symptom of all was intrusive recollections. These people had really graphic descriptions of the recollections. They described it as snapshots that kept clicking in their heads -- don't jump -- and videotape movies that kept replaying in front of their eyes. The next most frequent symptom was being jumpy and easily startled. The least common symptom was numbness: 14 % of the men and 5 % of the women. There were several symptoms that were more often reported among women: intrusive recollections, dreams and nightmares and flashbacks. There was one avoidance symptom that women had more of, and that was avoidance of reminders. They would purposely not drive by on the street that the cafeteria was on. Women had more insomnia, cautiousness, and jumpiness than men. You notice we were discussing in the last couple of days about insomnia being the most common symptom. We found it to be the third most common symptom in this. They described really vivid cautiousness and jumpiness. They would tell us that they couldn't sit with their back to a door, that whenever anybody came in the door, they had to be facing the door.

And they said this over and over. Almost everybody said this. They spontaneously volunteered that they had developed a strange habit of whenever they saw a new person, either walking in a door or coming into a room, their eyes immediately went to the hand to see if they had a weapon. And it was just involuntary and automatic. Even though survivor guilt is no longer part of the criteria, we asked it. And women were significantly more likely than men to report survivor guilt.

Compare rates of men and women by symptom group. Women had more of the reexperiencing intrusive symptoms than men. They did not have more avoidance and numbing, unlike the previous study that I cited. I think it was -- I don't remember which one it was now. They had more intrusion and avoidance. We had more intrusion and hyperarousal in the women compared to men. So our women were not more avoidant, but they were more aroused and more intruded upon. And overall the women had more PTSD symptoms than men.

Now I'm going to get a bit more complicated on us. I hope you can all see this. This is women and men presented separately, diagnoses before the disaster and after the disaster. Now, after the disaster I have broken diagnoses down into prevalence, in other words, all people who meet criteria for the diagnosis after the disaster; and incidence, the people whose post-disaster diagnosis was new. They didn't have it before the disaster.

More women than men had PTSD before the disaster, 15 % of women. This is a highly traumatized group of women. But you remember Breslau found an almost 12 % rate of PTSD of women in the general population. So this may not be all that remarkable.

DR. URSANO: The traumatic events for that group?

DR. NORTH: Yes. They were the PTSD trauma criteria.

DR. URSANO: Like what kind of things?

DR. NORTH: Rape, assault, accidents. We have the data on which it was. I don't remember now.

DR. URSANO: It wasn't that a tornado had gone through the previous year or something?

DR. NORTH: No, no. It was endemic kind of stuff. Afterward, 36 % of the women and 20 % of the men met criteria for the PTSD specifically related to the Luby's incident.

In men, the reason that 21 % is higher than 20 % is we had missing data on one case, but virtually all the men's PTSD after the disaster was new stuff. In women, most of the PTSD, 9 % compared to 36 %, was new stuff, but a little bit of it was repeat PTSD.

Before the disaster, 18 % of the women met criteria for lifetime depression. The men had five %. After the disaster, 15 % of women had current major depression, compared to 5 % of men. About half of the current depression after the disaster in women was new and half was either recurrent or persistent.

Panic and GAD were pretty uncommon in this population. A quarter of the men had alcohol problems before, but not many admitted to alcohol problems after. Maybe the disaster scared it out of them. The women had significantly less preexisting alcohol problems than the men. And they reported very low rates of alcoholism afterward. Drug abuse was low in this population, same with antisocial personality and somatization disorder.

The rates below are rates of any non-PTSD diagnosis. Thirty-two % of the men and 24 % of the women had a preexisting diagnosis. And, again, the numbers are so big for the men because of the alcohol diagnosis.

Afterward 21 % of the women and 10 % of the men had a diagnosis besides PTSD. And in the women only about half of that was new and half of it was old diagnoses.

This is a summary slide after the shooting. Twenty-one % of the women, compared to 10 % of the men, had a non-PTSD diagnosis. This was not quite significantly higher for women. And the women were on the verge of being significantly higher than men in PTSD after the disaster.

DR. URSANO: Now, these numbers here, these are new cases or these are prevalence?

DR. NORTH: Prevalence.

DR. URSANO: Prevalence post-disaster?

DR. NORTH: Current prevalence post-disaster. Overall 46 % of the women had any diagnosis afterward -- that's not shown here -- compared to 29 % of the men, any diagnosis.

Now I want to look at co-morbidity, again a complicated slide. We're looking at men and women separately. We're looking at what % of people report PTSD according to whether or not they had one or the other diagnoses. I'm breaking it down by pre-disaster and post-disaster diagnosis. Of the women who had major depression before the disaster, 62 % had PTSD after the disaster compared to 30 % who had no preexisting major depression. For any other non-PTSD diagnosis, 56 % of women had PTSD compared to 27 % without such a history. And that's significant in women. So pre-disaster disorder predicts PTSD in women, but you can see it didn't predict it in men.

DR. URSANO: Now, pre-disaster depression, in particular, or any diagnosis or both?

DR. NORTH: Well, depression, if they had depression in the past, 62 % of them had PTSD. If you combine all the non-PTSD diagnoses in the past --

DR. URSANO: Including depression?

DR. NORTH: Yes.

DR. CARDEÑA: It's including depression, isn't it?

DR. NORTH: Including depression.

DR. CARDEÑA: The rate is lower than just depression?

DR. NORTH: Yes, which means the other diagnoses didn't predict as strongly as depression did.

DR. WEISÆTH: Did you find that getting information on pre-morbidity was easy, the reliability of the information about --

DR. NORTH: We didn't do reliability studies. So we don't know.

DR. WEISÆTH: I mean, did you get the information about pre-morbid functioning from independent sources --

DR. NORTH: No.

DR. WEISÆTH: -- or is it based on interviews?

DR. NORTH: No. These are based on interviews.

DR. WEISÆTH: My guess is that, although I haven't looked at our figures, we've got the possibility of getting independent sources, --

DR. NORTH: Nice.

DR. WEISÆTH: -- the information from independent sources. You know, we have a register where, perhaps, it's easier for us to find that kind of data. And all had been seen by the company medical officer within a year before this. I'm referring now to the industrial explosion study. And it could be that men are less likely to volunteer information about previous problems.

DR. NORTH: Could be. That's our next study, I guess.

DR. WEISÆTH: Well, I don't know what you would say, but women are generally more open about what psychological problems they have had.

DR. NORTH: Yes. Well, and you also wonder: Is that more true for retrospective symptoms than for current symptoms?

DR. WEISÆTH: I think so.

DR. NORTH: Okay. Well, keep that in mind as you interpret these data.

DR. URSANO: Actually, Carol, what you were talking about at lunch about people forgetting the intervening symptoms of avoidance, was that different in men and women about what Lars was just asking about, about whether or not we call them past symptoms?

DR. NORTH: I have not analyzed it yet.

DR. WEISÆTH: Well, we had a test here in the UNIFIL study. We asked all those who had it why, and they were compared with what the records said. There was quite a number of discrepancies there.

DR. NORTH: Interesting.

DR. WEISÆTH: I mean, they would say that, "Well, I had to go home to continue school" or something like that. It turned out it was a medical reason. I mean, the last thing you would lose is your self-respect, isn't it? So it could be harder for men to acknowledge.

DR. NORTH: Well, say this was the only source of information you had. Basically, if a woman told you she had preexisting psychopathology, you know that she's more likely to report to you current PTSD. And then looking at --

DR. URSANO: That's true in women, not true in men.

DR. NORTH: Was not significant in men. In fact --

DR. URSANO: Is the difference in the significance level -- I can't think quick enough about the numbers -- potentially just due to the lower base rate of depression in men?

DR. NORTH: It may be partly because you can see --

DR. URSANO: In other words, since you have a lower base rate, you get a lower predictability to begin with.

DR. NORTH: Yes. The numbers are low in men on that. But, interestingly, when you add in all the other diagnoses, it goes backwards, 26 % without the diagnosis in PTSD and 13 % with. That's because of the alcohol use disorder. It was backwards. I mean, it wasn't significant, but the numbers suggest that preexisting alcohol protects them from having current PTSD. Anyhow, co-morbid diagnoses after the disaster, post-disaster diagnoses, in men having current depression was predictive of having current PTSD, as it was in women. Again, the numbers in the men are low. There are only 3 people in that 100 %. But with a Fisher's Exact Test, it was still significant. And then other diagnoses was not significant in men, probably because of low numbers, but it was significant in women.

DR. URSANO: Let me make sure I understand that line. That's essentially co-morbid at the same time; is that right?

DR. NORTH: Yes, post-disaster.

DR. URSANO: That means if you've got the one, you've got the other. If you've got depression, you've got PTSD. It's true in both men and women.

DR. NORTH: Right. So a lot of co-morbidity, perhaps a little bit more in women than men.

Now we're looking at co-morbidity from the opposite direction. In subjects with and without the PTSD, what is the % with the co-morbid diagnosis? Well, in women who had PTSD after the disaster, a third of them had preexisting major depression and 41 % had some previous diagnosis. The majority of them did not have previous diagnoses, but a considerable portion of them did.

In terms of post-disaster co-morbidity, both men and women with PTSD had pretty high rates of current depression and other diagnoses in women.

We asked them how they coped. Not many of them drank to ease the feelings, twice as many men as women, but not significant. A lot more women took medicine than men, 41 % of women compared to 9 % of men. A lot of them went to a therapist or a counselor or a doctor and told them about bad feelings, more than half of the women and a third of the men. That was a significant difference between women and men. And virtually everybody turned to relatives or friends to discuss their feelings. And that was pretty saturated for both men and women.

Now, the next slide looks at follow-up data. We went back a year later and looked at rates of symptoms. PTSD at index, men 20 %, by a year had dropped to 14 %. So the majority of PTSD cases in men were still present and in women, too. The rates dropped from 36 to 20 %. It looks like it dropped a little faster in the women than in the men.

DR. URSANO: Now, the index was how long after the --

DR. NORTH: Three to four weeks. Then follow-up was one year.

DR. WEISÆTH: Do you interpret that the rate of the co-morbidity perhaps was faster in women?

DR. NORTH: It kind of looks that way.

DR. WEISÆTH: Yes.

DR. NORTH: But when I did a significance test, it wasn't significant.

DR. WEISÆTH: We found that in the centrally exposed group because the stressor exposure had been so severe that even the most healthy had reacted. And they had the quickest recovery rates.

DR. NORTH: Oh, I see.

DR. WEISÆTH: So if the women are more sensitive anyway, they act. You would recruit into the patient group also those who are from the start the most healthy or more healthy.

DR. NORTH: Maybe less healthy if they're more reactive.

DR. WEISÆTH: Yes or in the men perhaps the proportion of those who develop PTSD, a higher proportion, come from a vulnerability. Then they would -- at least this is what we find -- need a much longer time to recover.

DR. NORTH: So they're more deviant because they have lower rates, so the ones that -- get it are the more sick, deviant type. Interesting.

DR. WEISÆTH: So what we found was that the recurrent rate was quickest in the - well, we had various groups, but it was slowest in the spectators because those who had reacted there really --

DR. NORTH: They're reacting to a lot of previous baggage.

DR. WEISÆTH: Yes.

DR. NORTH: That makes sense.

Well, depression: the women in the acute phase had significantly more depression than men, but they had dropped back to men's levels at a year. So the depression looks like it dropped out faster than the PTSD.

And then any non-PTSD diagnosis: the men didn't drop, but the women dropped in half. And that's because the men, I don't think, were reacting with these other disorders to the disaster.

This is a summary slide of predictors of the acute phase disorders, predictors of PTSD in women. Previous major depression before the disaster predicted PTSD in women. That was not true of the men. Previous psychiatric illness of any kind in women was predictive of PTSD after the disaster. That was not true in men. Both men and women with major depression after the disaster were likely also to have PTSD. And women with another co-morbid post-disaster psychiatric disorder were also more likely to have PTSD. That was not true in men.

I've got for you a list of variables that did not predict PTSD in women or didn't predict any diagnosis. Age made no difference in men or women, nor did race, nor did marital status. So these husbands did not appear to be a liability to these women, unlike previous studies.

Education was not associated, nor was exposure status. We looked at the women who had been in the dining room, compared them to the women who were off-site, compared them to the ones who weren't in the dining room but came into the scene after it was over and saw the carnage. Their rates were not different.

DR. URSANO: They were all employees?

DR. NORTH: No. Some of the women were employees, but most of them were patrons in the restaurant.

DR. URSANO: But were there any patrons who were off-site? I'm trying to get a picture.

DR. NORTH: Nine. I don't remember how many of those were women. But we didn't find a significant difference in diagnoses by exposure status, which kind of surprised me, but --

DR. WEISÆTH: How wide was the variation on exposure?

DR. NORTH: We had women who were in the dining room being shot at, including some women who were shot. We had women who were working in the kitchen who escaped out the back door when they heard the shooting. We had women in apartments who received injured people into their apartments. We had some women in the parking lot who only saw the aftermath.

DR. WEISÆTH: Well, I remember Bob Pynoos suggested that, as far as I remember, children who were, in fact, far away from the shooting had quite strong reactions, but more of a grief reaction. So the combination of the traumatic syndrome and the grief reaction sort of could explain some of that, while those who were more centrally exposed could have a -- that should produce --

DR. NORTH: Well, I also looked at the variable of whether or not they lost a loved one.

DR. WEISÆTH: Yes.

DR. NORTH: And that didn't predict PTSD or depression. This was a very close community. And I think that the closeness of the community made everybody more homogenous in their reaction, maybe it soothed the people who were severely affected. Maybe in the people with less exposure, it might have made their upsets more acute.

DR. URSANO: The people in your low-exposure group, though, are part of the disaster event.

DR. NORTH: Yes.

DR. URSANO: This was not like another city, another Luby's 50 miles away.

DR. NORTH: And they knew the people who were shot and all of that.

DR. WEISÆTH: It's an old military experience that those in the support troops may be just as bad off because they have more fantasies about what goes on and less reality confrontation. Maybe sometimes that can balance. I don't know.

DR. NORTH: Unfortunately, I discovered Friday night when I got my slides back that one of my slides didn't get to the slide maker. So I made a transparency. This is a summary transparency that, basically, lists the findings in a summary form. Regarding co-morbidity, more than half of women with a pre-disaster disorder had got PTSD after the disaster. Three-quarters of women with the acute depression after the disaster also had PTSD. More than half of the women with PTSD had no prior psychiatric history. So, most of the people that got PTSD came from a clean slate. And half the people with PTSD after the disaster also had a second disorder. So there was a lot of co-morbidity.

As far as coping, more than half went to a doctor or counselor. Almost half were drugged or medicated. They didn't use much alcohol. And they turned to relatives and friends. In a year, less than half of those with PTSD had recovered and depression had lessened to a greater extent even than PTSD.

So, this is a conclusion. Women subjectively have more upset and harm and greater feelings of being not recovered. They have more PTSD symptoms than men, particularly reexperience and arousal, but they didn't have more avoidance or numbing than men. They showed more acute phase PTSD and depression than men and less alcohol problems, although both of these weren't significant. The numbers were greater, but not the significance. The women's depression, in particular, had decreased at a year. Pre-disaster psychiatric disorders predict PTSD in women. And they have more medication and doctor-visiting behaviors. Well, women, then, are probably more vulnerable than men after disasters such as this one with more distress, PTSD, depression, co-morbidity, et cetera.

The take-home message is women who have a prior psychiatric history are the ones most vulnerable. And if you really want to put your resources quickly where they'll do their most good, it's in women with previous psychiatric history, although it's important not to overlook PTSD in those without because most of the women without disorders with PTSD didn't have other disorders. Also, in a post-disaster population of women, if they're depressed, don't stop looking there because 75 % of the depressed women also have PTSD. Similarly, if you find PTSD in screening women after the disasters, don't stop there. Screen for other disorders because 50 % will have another disorder. PTSD may be more long-lasting than depression, which may be more reactive. One place where we could maybe have considerable benefit for women, in particular, is education of doctors and counselors because women are going and taking medication. It doesn't appear that education, age, and marital status have an effect, but we need to know more about those.

I really haven't gotten into the somatization data that we have about women, whether it was related to exposure status or more to other life events. We do have those data, and it would be good for me to look at those.

As far as future research, I think the one thing that can be said from my findings here is it's really important for all research studies of disaster to report rates separately by gender because if you don't, you can't compare different disasters. If you have one disaster that's 75 % women and another disaster that's 25 % women, it's comparing apples and oranges unless you separate them.

We need to know more about the longitudinal course, whether how people remember and how their symptoms diminish over time. We need to know more about the relationship of women and their social supports in these settings.

I really didn't talk about domestic violence. We didn't gather data on that in this study, but we did in the flood study. We don't know anything about how women cope, in particular, particularly if their cognitive processing styles are different from that of men, possibly the relationship of role expectations. We didn't look at that.

These epidemiologic studies have said nothing about the neurophysiology and the neurochemistry, whether evoked potentials or whatever are different in women than men. Maybe you can comment on that.

And then treatment studies. I really don't know of any treatment studies in women. We need some experimental treatment studies. In particular, treatment studies need to pay attention to co-morbidities because it's the co-morbid disorders - anxiety disorders, depressive disorders - that have medications that are specifically helpful that because women seem to have co-morbidities could potentially help women more. And maybe that's why they've gone to doctors more and gotten more medication for these co-morbid disorders.

And if you want to ask questions at this point, I'll be glad to discuss it. If not, I can talk about some other related things in the field, problems with dissociation. I can mention that we've got some dissociation data along with these data and how it's different from other populations.

DR. URSANO: Let me just see if there are any questions. That was very nice information. Yes, Lars. Go ahead.

DR. WEISÆTH: It's very impressive. I'm sorry I missed the start. Did you find anyone who improved because of this experience for a passing period or for a longer period?

DR. NORTH: We asked people how it affected their lives. And I don't have statistical data. I can just tell you anecdotally from what I remember of the interviews. Almost everybody had something positive to say about the experience, about how it affected their lives. We asked them how it affected their lives. And then most of the people told us a variety of answers. A lot of the answers were positive. And then we specifically asked, "Is there anything good that came about as a result of this?" And nobody was insulted by that question. And almost everybody had something good to say. And the most common answers were "It brought the community together," "I realized that people care about me, and it makes me not take things for granted. And it makes me realize how much I care about other people."

DR. WEISÆTH: How about mental health? Did you see any neurotics improve, for example?

DR. NORTH: No.

DR. WEISÆTH: The reason I ask is that my impression was that if you had a real depression, you were more or less immune towards PTSD.

DR. NORTH: We really didn't see that. We saw that depression was a liability, in general. As far as specific cases, during the honeymoon period, we saw some people who got energized and kind of a little giddy. We went back later that year. And some of those same people who were those who had gotten energized and motivated from the experience were in a low. They were no longer helping other people. They had run out of steam. They were in the dumps. So, initially you get this glow and you get people saying all sorts of positive things that came out of it, but next year that glow is gone.

DR. CARDEÑA: I had a comment. And I hope that we will get to the dissociation, obviously, and maybe this is a good introduction. I'm going to talk briefly about four studies that I think that for these particular aspects haven't been published, but they all have gender information.

There's a study that we did on the earthquake where the data showed that within the first month, actually within the first couple of weeks, women were dissociating more than men, significantly more so.

Jeff Staab, here, did a study on Typhoon Omar. He found a significant effect, as well, for women dissociating more.

DR. NORTH: What population was this?

DR. CARDEÑA: It was dealing with graduates. Which one, mine or --

DR. NORTH: The dissociation where the women were dissociating more.

DR. CARDEÑA: It was graduate students and medical students.

DR. NORTH: Where?

DR. CARDEÑA: Stanford and at --

DR. NORTH: What percentage was Hispanic? None?

DR. CARDEÑA: It was almost none.

DR. NORTH: What roots of dissociative symptoms did you get?

DR. CARDEÑA: Well, right in the first month or so, about 40 % or so were talking about feeling that they were detaching out of their bodies. About 30 to 40 % were saying that they had other forms of depersonalization. About 70 % or so were having problems with attention. The more obvious dissociation as far as the depersonalization were about 40 % or so. And four months later they were way down in percentage.

DR. NORTH: And what was your sense of how disabling these symptoms were for these people?

DR. CARDEÑA: I don't think they were.

DR. NORTH: They weren't?

DR. CARDEÑA: They weren't.

DR. NORTH: So that's really different from these symptoms in dissociative disorders in the population.

DR. CARDEÑA: That was not an issue, generally speaking. As far as I can tell, I had some anecdotes from people.

DR. NORTH: We found very --

DR. CARDEÑA: It was almost nonexistent. Most of the dissociation that I would speak of as far as the earthquake was depersonalization. That was most of it - attention narrowly focused on an event.

DR. NORTH: So the character of the dissociative symptoms was really very different from what you see in dissociation and --

DR. CARDEÑA: I'll tell you what didn't happen. There was very low amnesia and first-rank symptoms, which do happen with DID (Dissociative Identity Disorder), very --

DR. NORTH: Oh, yes. They were slightly higher the first month, but a very low percentage of people had any kind of first-rank symptoms at any point in the first month and then four months later.

DR. CARDEÑA: So no, it wasn't anything like DID kind of symptoms. And amnesia was very, very rare. It was mostly depersonalization kinds of events. Timelessness is another study that was represented a while ago and a sex effect was found again. Women dissociated more. He found that timelessness and a sense of demobilization were the significant symptoms or were the most prevalent symptoms.

DR. NORTH: So did you find that the earthquake created dissociative disorders?

DR. CARDEÑA: Yes.

DR. NORTH: I mean, people who were --

DR. CARDEÑA: Not disorders. I'm sorry. Symptoms. And obviously I don't know how much people were dissociating before the earthquake. We have no perspective as far as no prospective study, getting people before anything has happened and following through and so on. But, by and large, most of them came down, significantly so, four months later.

The other one that was interesting is that of about 98 items that we asked about, there were 2 that increased significantly with time, not decreased, but increased. And one was headaches. The other one was back pains, backache. Either you can make a sense for some kind of stress-induced analgesia -- people were much more concerned on --

DR. NORTH: So conversion.

DR. CARDEÑA: No. The other way around, the other way around.

DR. NORTH: Headaches and backaches are conversion symptoms.

DR. CARDEÑA: They had fewer symptoms later on than shortly after the event.

DR. WEISÆTH: You mean they improved.

DR. CARDENA: They improved, yes. Those were the only two items.

DR. WEISÆTH: We found that people with gastric symptoms, you know, chronic gastric ulcer patients, for the first time in their lives had no symptoms after this shocking experience. And I wonder whether that's the NATO influence. But that was also a passing effect. It was one of the positive effects, shock treatment. But it's not a detailed study with X-rays.

DR. URSANO: Carol, maybe you would like to make some comments on your data from the dissociative disorders. Maybe we can stretch for another five minutes or so.

DR. NORTH: Well, my sense is that dissociative symptoms in post-traumatic disaster populations are really different from the dissociation that you see endemic in the general population in dissociative disorders. The reason I say so is that I have additional data that I presented last year at the APA. We used part of a dissociative disorders interview schedule and collected data on dissociation. We also used Cloninger's tri-dimensional personality questionnaire to get at personality characteristics. We found that the rates of dissociative symptoms were just amazingly low. We would ask these symptoms, you know, like, "Do you have other personalities or other parts of you that talk to you or do you hear sometimes your voices talking to you or do you feel like you're another person or have you personalized states?" And people would look at us like, "Are you crazy? What are you talking about?" I mean, this was not the kinds of things that they were experiencing. So rates were really low. But among those who had symptoms, well, dissociative symptoms in general, were associated with PTSD symptoms. But the associations were weak because the numbers were small.

In addition, what was interesting was the dissociative symptoms were not associated with Cluster B personality symptoms (borderline, histrionic, narcissistic) that you see in the general population. They were associated with Cluster C personality, anxious and avoidant personality. So, my general feeling is that dissociation in adult disaster populations is very different from dissociation in adults with dissociative disorders, and needs further study.

A few other comments from my one-year follow-up data that we were discussing at lunch. I've been analyzing the one-year follow-up data on PTSD, and it's very interesting. It gets so complicated that I was unable to break up the numbers between men and women for you today. But, basically, what we found was that although the rates of PTSD had dropped significantly at one year, what was happening is a lot of people got better, but we got a lot of new cases. And a lot of these new cases were people who didn't quite meet criteria at index, but had a few more symptoms over the year and met criteria at follow-up.

What was interesting is we got prevalence at acute Phase I. And then we got post-disaster prevalence at acute Phase II. And a lot of the people who met criteria at Time 1, when asked at Time 2, not only didn't meet criteria but said they never met criteria. In other words, they had forgotten. Eighty-three percent of those who had recovered clinically from Time 1 to Time 2 had forgotten that they had PTSD at Time 1. I also looked at PTSD symptoms by Cluster Groups B, C, and D to determine which group of symptoms was responsible for the forgetting. It was the C symptoms, the avoidance/numbness symptoms, that they had preferentially forgotten. So it's going to be --

DR. URSANO: That was, again, the 83 % of those who have PTSD had forgotten or 83 % of the new cases, those that went over the threshold?

DR. NORTH: Eighty-three % of the people who met criteria acutely but at follow-up did not meet criteria. Of those people, 83 % told us at Time 2 that they never met criteria at Time 1. They had forgotten. It's amazing what forgetting does.

DR. WEISÆTH: That reminds me of what I told you that Dick Moss found in a study of accidental injury cases where they were injured several times during the first couple of weeks, that those who did not develop PTSD, tended to view the threat experience as less threatening as time went by. It gave us an impression of forgetting of the situation, why the PTSD –

DR. URSANO: Isn't this the reason why my wife agreed to have a second child with me and it's the same issue that, in fact, one forgets the event?

DR. NORTH: This is why people run marathons every year.

(Laughter.)

DR. WEISÆTH: So, I mean, what you are describing is that.

DR. NORTH: You forget your pain.

DR. URSANO: Although we have not studied that in psychiatric syndromes, we have studied it in physical arenas. We haven't studied it in psychiatric arenas.

DR. NORTH: I'm currently in the process of finishing analyzing this data and trying to write it up, but it's mind-boggling. So it's taking me a while.

DR. CARDEÑA: It sort of makes sense because I think what they are forgetting are more experiential events, rather than behaviors that they would observe.

DR. NORTH: Yes.

DR. CARDEÑA: So I think there may be something to the fact that you have the dopamine system and the endorphins, and so on, kicking in shortly after the event. You would be in a somewhat different psychological state. But you have no particular observations of behavior. It is an experience. Later on you are in a different psychological state in which it is difficult to remember because you are not remembering behaviors. I think the hyperarousal you can more easily say, "Oh, yes. I remember that I was waiting" and so on.

DR. NORTH: Well, it's easier to remember maybe positive symptoms than negative symptoms.

DR. URSANO: Well, we are not only at, but beyond, the time boundary. And I want to thank Carol for some very stimulating and, as always, very well-done work that leaves us with more questions than we have answers, but leads us farther down the road. Thank you.

Future Role of Women in UK Armed Forces

Colonel Robert A. Leitch MBE LRAMC

It is certainly my pleasure to introduce Colonel Robert Leitch. He is the Medical Liaison Officer for the British Army. He is working over at the Army Surgeon General's Office.

COL LEITCH: Yes, for the next three years, but I have only survived the first ten months.

MAJ SUTTON: To give a glimpse of Colonel Leitch's background, he joined the Army as a junior soldier in 1963, trained as a registered general nurse and an operating theater nurse and served as an enlisted soldier with the 16th Airborne Brigade Medical Units from 1968 to 1972. Subsequently, he served in a variety of positions including the G1 Personnel Officer in the Falkland Islands conflict in 1982. He also was the Chief of Medical Operations and Plans for the British forces in Southwest Asia during DESERT STORM. He is also the co-author of a medical support handbook for UN operations. His hobbies include running, fishing, riding, and skiing.

COL LEITCH: Notice they are all running away from things. It worries me, that last statement, especially in this sort of audience.

DR. MARLOWE: The only question is dry flies or wet flies?

COL LEITCH: Dry ones.

MAJ SUTTON: Well, we would certainly like to welcome you here as one of our guests in an ongoing series of consultations being funded through the Defense Women's Health Research Program for a grant that we are doing during this fiscal year.

COL LEITCH: The moment that Loree mentioned the consultation, I was fascinated. I was hooked instantly because this is something that is absolutely peculiar to me in that I work for an institution, that is the British Army, Navy and Air Force (I can combine them all together), that has not decided which way it is going in the future with regard to how it manages people, the psychology of war fighting and the people that do this business. There is a great history regarding the psychology of war and how military men do their business or have done their business for hundreds of years, but we are at a critical point at the moment. That became obvious in my last job. I will give you a little background to tell you on what authority I speak.

I was trained as a nurse in the Army and I also worked as a mental nurse. Then I decided that the people with whom I worked at a grand old hospital near Southampton were not people I wanted to live the rest of my life with. I left and went to work in an operating theater which removes you completely from people, doesn't it? That is real escape. I then proceeded through the system.

I have always had a real interest in this area. After two wars and time as a medical man with the military, you begin to have an interest in people. If you do not then you have a real problem. I developed this interest in what could best be called the psychology of warfare, that is what I choose to call it, anyway. I have a considerable number of friends who have been involved in it permanently for a living.

What has developed from that is a recognition that things are changing, and quite rapidly, too. In particular, we have now (suddenly out of nowhere it seems) developed a real interest in women serving in the armed forces. When I come here I see any number of women.

I made a comment yesterday. It was to a lady who works in the Inspector General's office. This is my black book, my diary. If you would have known me when I worked in London in the Ministry of Defense, and you would have opened my black book, there would have been rows of telephone numbers, almost exclusively male. I promise you now, this book is 50% women's names. So much so that when I first arrived here my wife used to look at it and say, "who's she? Who's she?" Now she doesn't even bother to ask. My wife no longer even bats an eyelid, but if you would have asked me six months ago or asked her six months ago, she would have found it very strange.

The women are not all uniformed, but they all work in the military. That, in itself, is something that we find peculiar because in the British Armed Forces, the impact of civilians on the armed forces is much less than it is here. It is not just the fact that we are smaller, it is the fact that we have been a volunteer army independent almost of the people for a long time now. We are an instrument of policy just the same as the local police force and that is how we consider ourselves. The national psyche where once upon a time the country cared about what we did and how we did it has changed. We are becoming more and more remote from it, which is something. David Marlowe and I had this conversation recently where I suggested, for instance, that one of the problems that America faces at the moment is it hasn't cut the ties between the citizen's Army that it once had where everybody joined and everybody was part of it and the new, all professional Army that has existed since 1975. That in itself might be something that has to be addressed.

Going back to women and this recognition all of a sudden that I work with an organization that has so many women in it made me think, "have we reached the point in the British Armed Forces where we suddenly recognized we had lots of women?" The answer is no. We haven't. We have never reached that point. Women in the UK (United Kingdom) Armed Forces that have any real voice at all are the wives of servicemen, officers and soldiers. There is an enormously powerful influence from an enormous central wives' organization. We have it because we have traditionally been an Army, Navy, and Air Force of Empire where we have trotted off round the world. We got thrown out of here in 17 -- whatever it was -- and for the last two hundred or so years, we have been slowly, but surely, coming home. Everywhere we have ever been we had families and we had these family groups and the wives.

British service wives have the most peculiar attitude. There is a gap between them and their civilian counterparts and there is even a gap between them and service wives of other armies, other countries. I will give you a good example.

Loree told you that I went off to the Gulf War. Prior to going there I was a teacher and I taught at the Army Staff College in Camberly, Leavenworth. We had a whole bunch of students. You know how mixed they are at the war colleges. You have ten students in a group of which six will be Brits and the other four are foreigners; in one class, I had an Israeli. Now, the Israeli had arrived in November about two months prior to me going off to the Gulf. I went in early December. We instantly became great friends. He was an elite infantryman. I do not know how much you know about the Israeli Army but this group was very tough. They are fierce people. They are a fierce and hugely proud regiment. They extol the fighting virtues and Israel is what they believe in. He was a colonel and is now a general. He was in his middle thirties as a colonel. He had only three loves in life; the Chelsea football team, Israel and his wife. Two of them I could not say much about but the third one was a stunningly pretty girl who was an Iranian by birth; certainly her family came from there.

When it came to me leaving, we had supper together. This young lady sat with my wife and she said, "I cannot understand how you can let him go." My wife said, "what do you mean, let him go?"

"How can you let him go to fight a war at the other end of the world that has nothing to do with your country at all? I would not let my husband go. I would not let him leave the country and go and fight elsewhere."

It was very difficult for her to appreciate the fact that my wife married a professional soldier who goes wherever the king, queen or whoever it is, sends me, for money.

That is what I do it for. I do not do it for a love of king and country and some sort of abstract political ethos or whatever it is, or the flowers coming up in London. If I did I think, quite frankly, it would not be long, especially when the pressure is on you and you are a long way from home, before you would say, "forget it." When you are really cold and tired and 8,000 miles away from home and scared so much, quite frankly, the thought of protecting some sort of people back home, which would include the local yob with his big nail in his nose and hair that just wrecked my daughter's car, I would find very difficult to sustain.

She could not accept that. It was beyond her to understand the fact that my wife married a soldier who does it for a living. We have always had that. I know I am drifting around but I will get to women in the armed forces. I think the issue is much bigger. It is about the U.S. Armed Forces as a part of American culture, as part of the nation.

I think that what must happen, what will happen as the next 20, 30, 40 years go on, is that the close relationship that this nation has always had since Pearl Harbor, whenever it was, 1941, will change slowly but surely. I think the nation will recognize that what it has produced, this huge organization, will shrink and become more technical and professional and removed and all the rest of it. As the people who served in Vietnam fade into history, I think we will find a change in what the armed forces do and how they do it, and therefore a change in people's attitudes.

So, that is my start point. My start point is a pretty bold statement for somebody who does not know that much about the U.S. Armed Forces. I believe the fundamental difference between my organization and yours is that we have gone past that stage hundreds of years ago.

Now, what about women in it? We have a very small percentage. Of the Army, it is about 12% women, which is very small. We number our women officers and soldiers in the few thousands. The Navy, about the same, bearing in mind that the Navy is only about 60,000 strong anyway. We are talking about a few thousands. We are more and more recruiting women, particularly into those jobs that have to be filled by people who have brains as opposed to brawn. You simply cannot say, "this piece of technical equipment has to be operated by a man." It has to be somebody who can cope with the machinery and we are finding increasing numbers of women becoming officers in the Army, Navy and the Air Force.

It was not so long ago when our Office Cadet School -- there is only one -- the Royal Military Academy at Sandhurst, had no women in it whatsoever. The women went to a different college about four miles down the road. About eight years ago we took the women's college into the Royal Military Academy and we combined them both but they are still separate within the college. Equality has to start after their military training has begun. They do not begin with it. They have to shift slowly in.

As far as our single soldiers are concerned, they have gone completely integrated. They are not sharing barracks but certainly their training is all done together and has been done together for about five years.

If it starts with training, and we recognize that we are getting women in through all three services, the question is, "how far do they go?" Again, it is all a matter of male attitudes, I think. We have these great debates about whether or not women can fly airplanes. It staggers me that anybody should ever debate it. It does not take much looking at history to recognize that most of the planes that were flown from the west to the east during the Second World War in order to get them to Europe were flown by women. There was also that mad German woman who flew all her fighter jets for Hitler. We have throughout history examples of women who just seem to get on and do it.

We have three women working in the embassy, all soldiers; a staff sergeant, a sergeant and a corporal. I said, "look, I am going to go and talk about women in the military, what do you think?" No matter how much we talked, we certainly did not believe that the British Army, Navy and Air Force, because we believe we are small enough to talk to each other all the time, have problems with regard to women in the services that were worthy of huge debate. Problems exist but they are not issues of national import. They were not affecting the efficiency of the military.

Of the women I spoke with, one is 26 and the other two are about 24. In discussing problems, it did not take too long before amazingly the debate went from women in the Army to single parents in the Army. They made the jump, not me. They almost instantly leapt into, "well, you know women can do this and women cannot do that." Every time we came round to that point it was not whether or not that person was a woman, it was whether or not she had a baby that she was responsible for. I could not get the debate away from it.

It was not whether or not Corporal Jackie Trotter, who believe me is twice my size and lifts weights every night, could lift the same weights as me, or whether she could march the same distance; that wasn't the debate. The debate was whether in her career she was going to have greater commitments than Corporal Mitchell, the man, down the road? Was she going to be in a position where she could not fulfill all that he could fulfill?

When it all came down to it, it seemed, listening to them talk, that the only thing that she was going to get stuck with that he wasn't, was pregnancy and motherhood. That seemed to be their problem.

Roughly 60,000 service men and women in the active component of the U.S. Army, Navy, Air Force and Marines are single parents. Of that 60,000, over half are men who are single parents and there are about 20,000 who are single mothers. That is an enormous number of people. That is huge. Twenty-thousand people, I mean, what does that represent? That represents a division, a whole fighting division worth of service women who have children totally dependent upon them today, tomorrow and everywhere else. I can see a situation where you press the button and you say, "are you going, boys and girls?" and a whole bunch of people, whether they are male or female, stand up and say, "well, I can't go anywhere unless somebody looks after my child." That was the issue the Brits debated. As a result of you asking me to come along here I got into the most incredible debate, not about women in the armed forces, but about single parents and being a parent in the armed forces.

There is a chap called Davy Cooper who was the chaplain of II Para in the Falklands. II Para were the first committed at Goosegreen, to the bloodiest battle of all. David Cooper is no longer a chaplain. He works at Eton. He teaches metal working now. Cooper describes to the young soldiers the problem of being married and he did it particularly well for young officers. He says, "if you take a bunch of young soldiers who are single then you can do most anything with them, but the moment they become married they have another weight on their backs. They have something in their rucksacks."

I know that is true because I was married at twenty. I met my wife when I was nineteen and I was married at twenty. By the time I was twenty-four we had two children. By the time I was twenty-seven we had four. When I was a young soldier I was enlisted with a parachute regiment doing tours to and from Northern Ireland. I had a wife who was twenty-two with two babies, and I was doing four months in Northern Ireland. Then I would go back home and spend four more months in Northern Ireland. After you have been away for a while you find it hugely difficult to adjust to your family again. While on your tour, you are scared and your life is buzzing. You have watched shots go past. You have had your friend wounded and all the rest of it and it finishes. You think, right, I am home. You have written any number of letters and you have had all kinds of phone calls because you are only twenty-two. Next, you catch the plane home.

One minute you are handing your rifle to another guy. The streets of Northern Ireland are very similar to the streets of anywhere else in England and you pass the butcher and Woolworth and all the rest of it, but you are scared and you live on the high wire. You park your rifle, you get in the plane and you fly home. You get off the plane and all 600 of you are going in a straight line for home. You come in through the door and that is it.

All of the sudden there is the most incredible change. Your wife is waiting for you, and the children do not recognize you because you have been away for four months. You could be anybody. You are somebody who has suddenly upset the whole family because they are no longer the center of attention. Your wife has been spending at least four days getting ready for you coming home. There is this moment - it is difficult to describe really - but it is a moment of crisis when you think, "where do we go from here?" Then it becomes very uncomfortable and then it goes through almost invariably a period of great passion. Then it winds down and then you have a great row and it comes out of nowhere. The strangest thing is, no matter how many times you go away, it always happens, always.

When I was young I was convinced it was because I was young. As I got older, I still did it. One of my favorite stories concerns General Jeremy Moore who commanded all the land forces in the Falklands. When he was going to leave, we sat one evening and we got into this conversation. He was a very senior general and I was only a junior major. I said, "general, what is it going to be like when you get home?"

He said, "what do you mean?"

I said, "really, you are a national hero. The general who went to war with a Bible in his pocket."

He said, "well, it will be the same as it has always been. I am fifty-seven years of age. I have been a Marine all my life. I have been all over the place. I have been married for over twenty-five years. I will tell you what will happen. I shall go home. I shall go to the house. There will be conversation. It will go on. There will be passion. Then I am going to have a great row and I am going to go and live in the mess for at least a day."

I got a signal from him about three days later and it said, "Bob, I am home. I am in the mess!"

That is a general, a three-star general who did it at the age of fifty-seven. Having waffled round and round in a circle as to women and where they fit and wives and soldiers and the rest of it, it is important to recognize that the military has this peculiar attitude. They do things in a peculiar way. Why do you keep doing it? Do women go through the same thing when they go away? When they are four months away at sea, you know, flying on and off the *Benjamin Franklin* or whatever it is? Do they come home and meet their husbands and their children and they get the same reaction? Do they go through the door and say, "hey, I am here," and have a big argument? Is it different? Would they expect it to be different? That is what men expect. I do not know a soldier who hasn't gone through that every time he goes away.

There is this peculiar thing that happens when you have been frightened and you have been involved and you all grow as a group together. It takes me back really to what I was saying about why you do things. David Marlowe, can explain in great detail about why men fight the way that they do; why soldiers fight; why sailors and airmen do it. At the end of the day it comes down to if you are not doing it for Old Glory and Bill Clinton, what are you doing it for? Are you doing it for Arkansas? No, you are not. You are doing it for the people with whom you work. You are doing it for your friends, your buddies, your mates. That is what it is about. You daren't run away because you are more scared of being thought scared than you are of standing where you are. You are too scared of letting people down to just collapse and turn rubbery legged and not do it.

When they all go home and they meet their families, they go through the same thing again but they do not get the same reaction. My wife would say, "Yes, dear. It is very, very interesting." Yawn now. "I thought perhaps we would go out and buy some clothes." We meet this point when I certainly think she does not understand. I still need to get rid of it. She does not even begin to understand it so I have this great row. I go off and I find my friends and then we go through this business where we sit around, and say, "Yeah, my bloody wife doesn't understand." Or whatever it is, and "I'm never going back and let's all run off together and join the Foreign Legion," or whatever childish thing you choose to do next.

This, it seems to me, after 30 years in the military is what all soldiers tend to do. It is amazing. It does not matter whether they are fast jet jockies or surgeons. I mean, I have seen neurosurgeons and psychiatrists who acted the same way. No matter that these people have insight into human behavior. They still do it.

Now, so what? Well, that is the way men behave in battle and after battle. Is it the way women behave? Do they behave in exactly the same way, is this behavior foreign to you or do you see service women behave exactly the same way? The service women that I have met have behaved exactly the same way. I have seen them behave just as badly afterwards, you know. At Tailhook some of the women behaved worse than the men because that type of behavior was part of the ethos of the team and the group. Are we making an issue out of stress and women in combat? Are we making an issue out of stress of women in the armed forces that isn't necessarily there? It is common to them all. They all do it.

I have a couple of classic examples here. I told you I love to look at history so that I can find out whether it has ever happened before. I have two here which I will read to you. This is the first one. Almost the last shot fired by the French in 1706 wounded a trooper in Lord Hay's regiment of Dragoons, now the Royal Scotch Dragoon Guards. The soldier had a fractured skull and underwent an operation. Then it was discovered that the supposed man was really a woman. It turned out that she followed her husband to war. After discovering him, she continued to serve, making her partner promise not to disclose her sex. She had enlisted under the name of Christopher Walsh in 1693 and until her discovery thirteen years later had served in different regiments throughout several campaigns.

Naturally, the news of the exploit of Mrs. Richard Walsh, which was her married name, spread rapidly through the Army and the plucky woman received many kindnesses from officers and men. The great Duke of Mulberry himself took an interest in her and persuaded her to be remarried to her husband. The ceremony was attended by a large number of officers, all who kissed the bride before leaving. Mother Ross, as she was afterwards called, was appointed cook in her husband's regiment but at the siege she could not resist the sound of battle; so seizing a musket she killed one of the enemy. Unfortunately, at the same moment a ball from the enemy struck her in the mouth splitting her underlip and knocking one of her teeth into her mouth.

Mrs. Walsh's husband was killed in battle. At the end of eleven weeks she married Hugh Jones, a grenadier in the same regiment. After her second husband was killed, she married a soldier of the Royal Watch Fusiliers named Davis who survived her. Eventually, Mother Ross retired on a pension of a shilling a day given by Queen Anne and on her death in 1739 she was buried with military honors in the cemetery belonging to Chelsea Hospital.

Another example is that of Hanna Schnell. There is a painting of Hanna Schnell and it is in the National Portrait Gallery. Underneath the portrait, it says, "Born at Worcester in 1723, enlisted herself by the name of James Gray into Colonel Geiser's regiment at Carlisle in 1745 where she received 500 lashes. Deserted from thence and went to Portsmouth where she enlisted in Colonel Fraiser's regiment of Marines. Went into Admiral Boscown's squadron to the East Indies; at the Siege of Pon de Cherry where she received 12 shots, one in her groin and 11 in her legs. In 1750 came to England without the least discovery of her sex and on her petitioning his Royal Highness, the Duke of Cumberland, he was pleased to order her a pension of 30 pounds a year." People like this have been around a long, long time.

DR. TEITELBAUM: How did she manage to get shot in the groin and not be discovered?

COL LEITCH: That amazes me. Women have been around for a long time in the armed forces. I think it would be pompous of me to say that we do not have necessarily an attitude that accepts women in the UK in the British Armed Forces. We recognize those who are good as being very, very good and we let them get on with it. I do not think we have an attitude of what you might call positive discrimination; like the awful expression that is being bandied around American politics at the moment.

Affirmative action. Affirmative action is something that is complete anathema to the British Army, Navy and Air Force. It simply is that. I think affirmative action is probably anathema to us as a culture. I have a vivid picture of a young captain who was a teacher in the Education Corps. She worked as a watch keeper in the 1st Armored Division in the Headquarters. She was very young and very fit, quite pretty and blonde. The men really found this very difficult, this pretty blonde captain being constantly present. She was an Alpine climber and very good and was used to working and climbing with men in the Alps and the Himalayas and so on. What really distressed the men was the fact that every time they would get into one of these long latrines that the British Army have -- you know, they just put a row like that and you all sit down -- she would come and sit in the end one. It never bothered her but it destroyed the men. You began to get men saying, "is she around? If she's here I am not going." Eventually she had to be told by the Deputy Chief of Staff to stop this behavior. She had to use a separate toilet and she had to have a separate shower, too.

Now, she is a vivid picture in my mind because she could cope. I am sure eventually the men could cope but it was a very, very difficult adjustment for them. I had one young lady officer who worked for me who found life very difficult because she also was extremely attractive and single. I noticed that the officers in her mess, her peers, treated her the same way as they treated girls when they were in high school. She was bright. She was clever. She was physically fit. She could do anything that they could do and she was really good in map reading which really irritated them. They all made a play for her and were rejected. It was a case of the men reacting by saying, "well, let's make sure that she gets nowhere" and producing the sort of rumors that boys do when they are about sixteen. You would think they would grow out of it by the time they were twenty-six. You would think they would stop. It was a case of let's give her a reputation of being loose

I do not think that is uncommon and it tends to be focused very much at young, female officers who are very able. On being found able to compete with men, suddenly some men will construct something that will ruin her reputation through sexual innuendo. This I find is getting no better. I still find that very, very common.

That is how we stand at the moment. What about stress for women in our Army, Navy, Air Force and in the future? I do not think it is going to change that much. I think that life for women in the Army, Navy and Air Force in the UK will get easier as the men, themselves, begin to accept. That is the reality of life. That is what you are going to have to live with, fellows.

The question will come whether or not they should be in combat. What I think, quite frankly, is that we are moving further away from combat on the battlefield. We are no longer into "going over the top with a rifle, fellows." This issue of women in combat becomes an irrelevant argument. Once upon a time you had to stand up, 1,000 of you in the line and go over the top with a rifle. Then there might have been some sort of debate about whether or not women should be in there getting bayoneted along with the men. It is a spurious debate as combat, itself, becomes more and more remote. I can see no reason to debate it.

Can a woman fly an Apache helicopter as well as a man? If the answer is yes, that's it. Men are becoming less important on the battlefield, aren't they? Combat power, which is what we are talking about, is becoming less and less related to manpower, to people. That is a fact. We now put very small organizations into battle with enormous firepower. For example, the 24th ID MEG (Infantry Division, Marine Expeditionary Group), when it crossed the start line going over into Iraq had the combat killing power of the whole of Patton's Third Army in one light division. The 1st Armored Division UK had the artillery firepower available to Montgomery at the Battle of Alamein. Now you work out the number of men that were on the ground firing artillery rounds at Alamein and compare it to the number of men that we had, including the Alabama National Guard, with us firing multiple rocket launchers and the rest of it, and we are talking about hundreds as opposed to thousands. These people are also so far removed from the actual close combat that it makes the whole argument irrelevant.

Where do we go with the argument of women in combat? I think, quite frankly, it is a total irrelevance. I think where we go with women in the military proceeds from that. I think the great danger is for women to put themselves in the position where they feel that they ought to debate it in public and be something special. Women who would do that in many ways are stepping into the trap that an awful lot of men would lay for them. "Tell me why you are different?" There is a whole group of men who would love for you to debate your stress as being different from theirs; that stress in combat would be more for women than it would for men, that women would suffer more from PTSD (Post Traumatic Stress Disorder), as I saw in an article in whatever it was, the Darwin Herald or something, the other day. That stress is a bigger deal for women than it is for men. I am not sure that that is true. In fact, quite the reverse.

My experience of women in the military has been that they, in the main, cope much better than men with certain physical things. Women, in the main, seem to be able to suffer the cold much better than men. I think God built them that way. They also seem to be able to do some other things better than men.

I wonder if some women in the military are arguing themselves into a particular trap that has been laid out for them? Do the chiefs of staff push women to debate this in the open and then prove something? I do not know, but I do feel it is a dangerous path down which to go. Is there a need to prove that women have got different problems, stresses and different needs in the Army, Navy and Air Force than men? If the answer is yes, you have to prove it, then go ahead. The danger will be that you will get this positive discrimination, this special place. The center of the debate is, "should women be in combat?" I have already made my statement. I do not believe that is relevant because I do not believe close combat is what it is about anymore. I will shut up at that.

DR. TEITELBAUM: What about captives?

DR. MARLOWE: It has happened over and over again and women have done as well in POW (prisoner of war) situations as men. We had nurses who were in captivity in the Philippines.

I think the women in combat issue has been an issue based on the luck of the West since 1943. I had a cousin who was a WAC (Women's Army Corps) in North Africa. They were strafed and bombed continuously; Germany still had an Air Force. Since then we have not fought an opponent who had the kind of reach that was routine. We have created this concept of the sterile battle zone which is utterly fallacious.

COL LEITCH: My father is quite revealing at certain times. He is eighty-four now. He spent his entire life in the Army and was at Dunkirk. He served in India before the war. Then he was at Dunkirk and everywhere he went somebody dropped bombs on his head. He used to think he had a big target on his head. When you really get him going, he will tell you that the time when he was at Alamein it was relatively easy for him. He was an artilleryman. His job was to fire rounds out and somebody would fire back at him. His sister, his brother-in-law and his wife were living in Greenwich on the outskirts of London. They had the living daylight bombed out of them.

My father was having a really easy time out in the desert with nobody taking any notice of him because the desert is a big place to find somebody in. The people in Greenwich were constrained in this tiny little place where every night fire fell on their heads. How they survived, to this day I do not know. Yet when you start talking about warfare, there is my father, a hero in the war. His brother-in-law, who was a fireman, risked his life everyday of the week. He was no war hero. His wife and my mother, they were no war heroes. They did not get medals on their chests and have big VE (Victory in Europe) parades and all the rest of it. It was a case where you got on with it. And so, I agree with David. If you have never actually had bombs dropped on your head and on your village, you tend to think of these people being in harm's way.

I think the whole captive business is one that is all a bit weird, isn't it? I think it is a very male thing. It has to do with rape, to be honest. Men are very uncomfortable about it. I think this is some real primeval basic thing way down in the old psyche where men don't like the thought of a woman on their side being raped. Well, that is a big deal.

DR. MARLOWE: One of the most intriguing things about it has been the denial of the other side. Male prisoners of war have been raped routinely by many people who have kept them captive, but we have never talked about it.

COL LEITCH: Yes, because male rape, as you quite rightly say, David, is something that men have buried. Women have talked about rape for a long time. Male rape, of course, is something that men have no ambivalence about whatsoever, none at all. It is just too horrendous to contemplate, let alone talk about. Only over the last ten years really has it become an issue that people have discussed in the open.

DR. MARLOWE: But it is extremely common to POW's.

COL LEITCH: Yes. So have we extended that debate, do you think?

DR. TEITELBAUM: Well, I think you have hit right on it. It is the sexual fear or the sexual innuendo that is driving it all.

COL LEITCH: The big deal about the young lady doctor was the fact that she was raped. I mean she also had seven shades kicked out of her. She was really worked over and had a really hard time. If you ask anybody they will focus on the fact that she was raped when she was a captive. They don't talk about how she almost had her fingers broken, her eyes almost poked out, and cigarettes put on her. Quite frankly, if you had asked her about the rape she might say it was less painful than having cigarettes poked all over you and your fingers bent totally back. Men have a real problem with rape and men make the military because men have traditionally fought the wars and run the entire organization. It is the case of "well, if we have her along it is a real pain because she cannot walk as far as we can and she has to carry all this gear, and if anybody catches her they are going to rape her and this is going to be a real embarrassment for us all." We are going to hate it because the enemy is going to say, "and we raped your women."

Then it gets to the argument, why put these people in harm's way? Why do it in the first place? At Christmas, strangely enough, when you put on American television and you see some mum in her early thirties in her combat kit in Korea on television saying, "and to my boys and my husband back in wherever it is, to the kids and husband back in Vienna, Virginia..." and I have a real problem with that. I think, "what are you doing in Korea mending helicopters? Who is looking after your children in Vienna?"

You know, the most important thing in my life is who brought up my children. Not my contribution to advancing the good of the United Kingdom but my wife's contribution in bringing up four reasonably balanced children who are hopefully going to earn a living one of these days. I think this is a much bigger deal. Therefore, I have a problem with this lady who can push off to Korea and mend helicopters and leave somebody else to bring up her children. If I bring this up with my wife and my older daughter then I end up speaking with a high voice after a short space of time because they find this as typical male sexist nonsense. Am I missing something here?

DR. MARLOWE: What we saw in the Gulf was that many of these people had parents, sisters, whom they fully trusted to look after their children. They were worried and concerned about them. However, I was very impressed by several captains who were far more worried about the fact that they were in staff positions in the divisions and their husbands were up forward where they could not protect them. That was a very real feeling they had, "He is with a cavalry unit and I really should be out there in front of him so that no harm comes to him." They are fairly independent people. I think one of the things I would like you to consider that I have become very concerned about is our neo-Victorian victimization view of women. This view impresses me as designed to totally undermine the ability of women to function in any complex area of the society; the military being one of the more complex and more demanding ones.

COL LEITCH: I used to serve with the Scotch Dragoon Guards as their physician's assistant. They could be very chauvinistic, but for all their attitudes, the women that came in were simply treated as equals. If they could do the job, that was it. There was never an issue made after that, but it was implicit that women could not expect any big favors. Don't go in there and say you want this or you want that. The attitude was, "get on with it." It tends to run as a theme throughout the British Army in particular. So there isn't an attitude if you make it, you know you have made it. If women can get over all the slurs and other obstacles only then can they make it to the top and be treated as equals by men. I think this is because we are not looking to make victims out of them.

DR. MARLOWE: Yes, I am concerned that we may be headed for regression here. Over the past twenty-some odd years we have seen the movement from the kind of thing you have described where both officers and enlisted would hit on the women, then the women would reject them and the common response from men was, "well, the women in the Army were either all whores or lesbians, et cetera." That is gone and I think it has changed for a number of reasons. One of the reasons is that they have become the preferred spouses of men in the Army. I think that it would be easy to regress as we start talking about special sensitivities and special openness to stress. Women historically have been a lot tougher than men. We tend to forget that. In our culture women have always had more openness to express symptoms but not to stop functioning.

COL LEITCH: Yes. Any argument, I think, about whether or not women are needed in the military is completely negated by the demographic problems that we are going to face in the future. We have a real problem in the UK. I only noticed it the other day. It was in the Daily Telegraph. It was a comment about leisure suits; they have a peculiar name, don't they. It was some really disparaging remark about people who wear these suits all the time. In essence it was saying that the recruits we are getting now into the Army are physically not up to the job; neither are they intellectually up to it. So we are getting thousands of young men that we simply will not be able to train. Therefore, we are having to cast our net wider and wider. Once upon a time when you could actually say, "well, the problem with this girl, of course, is that she is not physically up to it." We have men that are no where near physically up to it either.

I think there are going to be increasing numbers of women employed in an all volunteer, professional military organization because needs must be met. They will have to be there because there simply will not be enough men to do the job, anyway.

DR. MARLOWE: As you pointed out, cognitive skills are becoming more important. The women we get in the U.S. Army tend to be more intelligent, better educated and more competent than the men who are coming in.

COL LEITCH: It gets to be a problem though when you get at the sharp end of male macho traditional areas; the Marines, the parachute battalions, the Rangers. Can a woman be a Ranger with a rifle? Again, I have an anecdote to put it in perspective, just to show you how men prick. In the Royal Air Force, pilots are almost exclusively male. We are getting limited numbers of women in, but there are hardly enough that you would ever notice. The Royal Air Force flies all our support helicopters. So, other than attack helicopters, which are flown by the Army, all the rest of the support function helicopters, Chinooks and the rest of them, are flown by the Royal Air Force.

Being a pilot in the UK is a big deal. I remember vividly when I was with the Scotch Dragoon Guards parked outside Kuwait somewhere. We were bored and out of nowhere into the squadron headquarters came a Puma, which is a light support helicopter about the size of a Sikorsky. We call them Crabs because they go sideways across the battlefield. We knew it was a Crab helicopter and in they came. The pilots all rounded up, lots and lots of dust, all right, fellows, here we go. You know, wearing Merlan shades, didn't we have a good war and all that jazz. We sat around and did male-type bonding things.

We had been at it for about half an hour when all of a sudden, up over the horizon came an American Blackhawk helicopter. It had those pods on the side that means that they can fly forever. Special Forces, you know. It came in and all the men were really interested. The Blackhawk had a look at us, did a circuit, saw the other helicopter and came in and parked.

Out came the pilot and the co-pilot who were instantly recognized as being short. They were small people. Off with the hoods, you know, the old mirror-heads and there are two women with long hair. The reaction was spectacular. The Scotch Dragoon Guards instantly all knew it was a woman. The two British helicopter pilots were completely melted because all of a sudden this was women doing a man's job with a better piece of equipment, too. This was state-of-the-art stuff.

As a student of human nature it was fascinating to watch and to see how these two Royal Air Force pilots sat outside the circuit then. Immediately the cavalry men were, "come on in, girls, we do not give a damn what you do, you just look nice. Have some coffee and have some food and all the rest of it." Whereas the men, the two Royal Air Force guys, really were not happy. It was simply because these women were doing something that they traditionally had done that was something very special in the pecking order and doing it better with better equipment. There was genuinely an ill feeling. Now that is a classic example of how women will always find it difficult to fit into an organization that has traditionally been male.

I have this thing here called Determination in Battle. It is a script read to the war colleges in years gone by. If you look at how the author has laid this out talking about determination in battle, you will see that the basic tenet of his argument is that when discussing human behavior we are immediately on uncertain ground. There are many varying views, especially among experts. Therefore, when discussing courage, determination in battle or morale -- call it what you will -- we have to accept some basic assumptions.

First, man is, by nature, an aggressive animal and unlike other animals who merely seek to dominate, man is prepared to kill. Next, although society is constantly changing, aggression is innate in man and has varied little, if at all, in recent centuries. Field Marshall Sims summed it up when he said, "I do not believe that there is any man who would not rather be called brave than have any other virtue attributed to him."

Women are stepping into an organization that has run on that sort of ethos for hundreds of years. Now if you believe in that ethos and you accept it for what it is, then that is fine. If you feel that statement about being brave is what you believe and you feel as strongly as I feel about it, then we are going to be able to work together. If you think it is a load of male "hokum" then we have a bit of a problem, haven't we? That is really where I rest my case. I still believe that underneath it all, despite how we are changing as a society, despite how our armed forces are changing, despite the impact of society, technology and everything else, military forces exist to do something horrendous; that is, kill people. In order to get you to kill people you have to develop a peculiar ethos. It is a very strange basic instinct, ritual killing. That is what it is there for. If it is for any other purpose then why is it called the Army? Why isn't it the police force or something? It is about killing. That ethos and that killing spirit has been inculcated and developed over hundreds of years.

Women want to join this organization and be part of it and for some, run it. If they can see a different way of doing it, then they are going to have to be very clear in their minds because the men that have been there for hundreds of years have developed an entire culture around this inescapable fact of killing. If that causes you great stress and you find you can't fit in then there is going to have to be some real hard thinking and changes in attitudes. How about that? I mean, have I just talked total nonsense? Do you not feel that is the way it is? How about the Navy? Do you not feel that is the feeling in the Navy? That is why sailors go to sea, don't they?

CDR GRIEGER: I think so. I think that captures why it is the way it is. I think any efforts to change that have to be well thought out and carefully planned. I think there is inevitably resentment to quick fixes of perceived problems that may not have been as great as they were. For example, the Tailhook scandal resulted in classes on anti-sexual harassment, which were driven into people some of whom did not perceive it as a problem and who are now offended by the fact that they are being challenged on their old traditions. In the long run did that help or did that hurt the cause for women in the military?

COL LEITCH: Yes, I think it was hugely damaging. I really do. I think Tailhook did nothing for women at all because it actually enabled that group of people in the military who could say, "well, you know, they cannot take it with the boys. They cannot do the same as the boys. When it all comes down to it, they are going to run home and say, 'please, sir, please, sir, look what has happened to me, sir.'"

DR. TEITELBAUM: Does the British military have the same problem that we see in this country; which is social issues intruding into the military organization and culture.

COL LEITCH: Social issues being?

DR. TEITELBAUM: You mentioned affirmative action, but also minority treatment, women, AIDS, and I could probably come up with some other issues.

COL LEITCH: It is amazing, isn't it, really? Do you know that there is not one black soldier serving in the Household Division? Of all the foot guards and the horse guards there is not one black soldier.

DR. TEITELBAUM: And nobody complains?

COL LEITCH: Why? We have had the odd one in and out but they never stay. We do not have the same representation of black people across the British Army that we have in our country, and not only black, but Pakistani. We have a much bigger Indian Asian culture than we probably do western. Most of our black people in Britain come from the West Indies or else a small number came from Kenya and Uganda and that part of the old Empire. The numbers are relatively small because they do not like the place and I don't blame them. If you have been to Kenya how could you possibly want to come to England?

Most black service members tend to be West Indian, second generation. We do not have considerable numbers either in the Navy or the Air Force. People attempt to make an issue out of it every now and again but it goes back to what I said at the beginning. That is, the military is in many ways not as closely part of the rest of British society as the American military is. It simply isn't.

I am staggered by what goes on on the Hill. All those soldiers up there, all lobbying and saying, "oh, I will come to work for you." I know a nurse, lieutenant colonel, who works for a senator. It is just beyond me. We simply hardly ever talk to our members of Parliament and our politicians. We are kept separate.

DR. MARLOWE: I have one question, leaving Tailhook aside. I am on record as opposing women in direct engagement ground combat forces. Why should we think that increasing female content or women in the military would in any way (other than acceding to certain kinds of ideologies) alter the necessary warrior component of soldiering? You know, there is no necessary relationship between those two.

COL LEITCH: Except if we agree to the tenet that warrioring, fighting, these days is increasingly more technical and less physical.

DR. MARLOWE: In the Persian Gulf War, you can describe some of the most successful operations as carried out by technicians of violence. I think when you get to the Ranger and Commando and SAS specialties where you have to kill people up close bearing arms, that is a different aspect of warriorship. On the other hand there is the ability to think, plan, execute and do things that you know are going to do terrible things to people because the nation says this is what you are going to do. You are going to take out this Iraqi position and you may be miles away or thousands of meters away. The TOWS killed most of the Iraqi tanks from hundreds of meters away. It is a little different. As warfare evolves we will never see mass armies again. If you create a mass army you have created a machine that can be destroyed.

COL LEITCH: Yes, a big target. Are we saying therefore that the person is less important on the battlefield than ever before?

DR. MARLOWE: More important and less important. The person is more important as the key element in a system that puts lethal force where you want to put it; but less important as part of the mass that has to fix bayonets and charge.

COL LEITCH: Yes, and therefore doesn't that affect though, David, the argument about women in combat?

DR. MARLOWE: Oh, I think it affects it. I have always been intrigued by it, even more so after the failures of the Spetznaz for five weeks in Grozny. Our scenario for a war in Germany and in central Europe began with 150,000 Spetznaz dropping down on all of our support facilities and the largest category of people in those facilities were women in uniform who were going to have to fight immediately. I think there is a misperception that those in the front are the only ones actually in harm's way in modern war.

COL LEITCH: Yes, I think that is something that does not come out in the open debates, particularly in the newspapers. People, when they talk about women in combat, do not follow the logic through. What is combat anyway and what is it going to be into the future? I find that a flaw throughout the argument and I agree with you in that respect.

DR. MARLOWE: It is all World War I infantry, over the top.

COL LEITCH: Can we go back to the social issues?

DR. TEITELBAUM: This line of discussion actually fits in here because it is being interpreted as a social issue. The woman who was so brave and who was raped and so forth in Iraq, that is being used as --

COL LEITCH: Right, as a social issue --

DR. TEITELBAUM: Rather than for the real combat issue.

COL LEITCH: Absolutely, and that is true about all the other issues that we have, including minorities. We do not attract minorities into the British Army. Traditionally, the British Army had regiments and battalions that were of the minorities. We had an Indian Army that was massive. We still have Gurkhas and things like that. You know, Gurkha transport regiments and we have Gurkhas with knives and so forth.

DR. TEITELBAUM: So you had it segregated by unit?

COL LEITCH: Yes, and we always have. We keep trying to deal with this positive discrimination and it fails. What is the point of trying to force something that must come about by evolution? It is going to happen eventually, has to happen and our experience is, every time we push something like this, it falls over.

DR. TEITELBAUM: So you think a demographically more integrated force will happen?

COL LEITCH: Yes, it has to.

DR. MARLOWE: I think you also see it in the French Army with the extraordinary number of Vietnamese and such who are now part of that regular army.

COL LEITCH: Yes, and Algerians and Moroccans. Given the hue of the French Army it is ever so difficult to recognize whether you are actually fighting with the French or with an Arab Army half the time because there is an enormous mix.

We do have other problems, no question. Our biggest problem at one stage, and it is becoming less so, was related to the debate David Marlowe and I had about the tempo of war and the tempo of operations. It does not seem to affect the Navy. I think it is because women who have married sailors know what they are letting themselves in for anyway. Women who married soldiers tend, in the main, to believe that there is going to be some sort of little white picket fence. The husband is going to go away with a rifle one day and come home a week later. Then they believe they will be all sitting around again in Fort Polk or wherever it is.

When you start the tempo of war and the going away and doing what I told you about, the way I described it; four months in Haiti, then back. It becomes like the end of the world. "You do not understand. Oh, you should have seen it all. Nobody understands me and you have never been here when it was important. Okay, dear. Calm down. Let's go down to the BX and have a few beers. Let's watch a video. Let's go to bed." The following day, he gets up, and goes and has a couple of weeks holiday. Then he is back in Rwanda or somewhere and he comes back and does the same thing again. What comes with the tempo of operations like that is real family discord. We did certainly have a real problem. When Northern Ireland was in its full flow in the early 1980's when we were doing tour after tour, we were having marriage breakdowns of enormous proportions. It was quite frightening.

DR. TEITELBAUM: You actually documented it?

COL LEITCH: I was asked to talk about suicide and was there a correlation between suicide and the increasing tempo of operations? I looked at our data and there certainly is none. As David would agree, suicide is a constant throughout the military. Tempo of operations does not affect it one way or another. What we certainly found with the increased tempo of operations, unquestionably in the Army, was increasing marital breakup. It required us to produce a proper social structure and a proper debriefing when husbands came home. We also setup debriefing of wives and running a wife's club so they all understood. This was about running a marriage when he comes home.

We took a great deal of your advice and the documents that you produced and said, "when he comes home, this is what he is going to be like. When you go home, this is what it will be like." You have to get down to some pretty basics. You cannot expect sex twenty-four hours a day, five days a week the moment you get through the door. These are the people who make up our Army; these young, nineteen and twenty-year-old married men. Actually educating them was a big deal to try and keep marriages together. We seem to have a working system now but we still recognize that as the tempo goes up, so do the problems. I think it will always be there. I am using myself as the example, I am forty-seven. If I go away now I know what will happen when I get back, as sure as the sun comes up because it is the way we are. Why should I expect my soldiers to be any different? That is certainly a problem.

DR. TEITELBAUM: If it is Northern Ireland and the British Army then what about the Israeli Defense Force? Surely they must have experienced this as well.

COL LEITCH: They do not seem to because I do not think the Israelis, go too far away and then they are back again. Interesting you should ask that question. I have a good friend who is in the Israeli Defense Force and you know they deployed into Rwanda. They put an Israeli hospital there. They were so unused to doing something like that they made a complete and utter mess of it. They were running an aircraft in every two weeks to replace almost all their military staff. They would have to take half of the military members of the hospital away and replace them every two weeks. This was because they were taking guys out of critical jobs in Israeli hospitals and away from their private practices. Most of them were reservists and they had no structure to enable a reservist to go away out of the country for four months. They had never done it. You know, you go out, you quickly do your job, you come back and carry on with your practice. That is the way they have been doing it for years. All of a sudden they had to go and stand in the jungle for four months and just be there. They found that a huge problem. I could have told you that was going to happen. I think the answer to your question is no, unless they go a long way away.

To be fair, look at your own Army. You started getting into all these things that the Navy had been doing for ages. Four months away, back, four months away. Can you imagine marrying a submariner? A man who can spend three months in a tin can at the bottom of the sea living as close as we are now but permanently; never seeing the light of day for three months then coming out. Do they have very high divorce rates in submarine warfare?

CDR GRIEGER: I do not know that it has been specifically looked at in the submarine versus other. It is a problem. It depends on the submarine service. There are two different aspects. There are the fleet ballistic missile submarines which, in fact, people prefer because they are scheduled. You know that he is going to be out four months and he will be back four months because he is on one of two crews. On the other hand, SSN attack submarines can disappear for eight months and be back for two weeks and go out for another one month and come back for one month and go out for a year. They essentially deploy to battle theaters with the Task group. It is a mixed population of what ships you serve with.

DR. MARLOWE: Initially in the nukes there were a great many problems. They were out for six months and a phenomenon was discovered. In the last two weeks when they were due to return home, everybody on the submarine was going on Valium. All the spouses ashore were going on Valium. They were having very major problems, primarily oriented around the problems of anticipation of reunion and then actual reunion. When they dealt with this back in the 60's they went to the four month cruise; they cut it from six months, but the divorce rate and the family violence rate had gone up tremendously and the psychological symptomatology rate had just gone through the roof on both sides. It was interesting because somebody put together these two things. This was in the Nautilus class subs. All these guys were coming in as they got ready to return from station in the Arctic, looking for tranquilization to prepare them to go home. Their spouses were doing the same thing. Valium was not a scheduled drug then.

COL LEITCH: I can understand that. I am sure that anybody who has been away for a length of time like that knows that feeling; that incredible anticipation for three or four days. You are convinced the aircraft is not going to arrive, you know? It will never come here. If you want to see real hostility, delay a ship home for twenty-four hours and watch the sailors really get wound up. If you looked at the end of the Falklands War, the moment the war ended all anybody every wanted to do was go home. They lost everything, everything. It was ever so difficult to get the discipline going.

We were amazed at the Americans at the end of the Gulf War. They lined all their trucks up and cleaned them out from one end to the other; they packed them and put them ready. Go and see what the Brits did. You open the back of a Brit truck and there would be food in there. We have always done it that way. We develop this peculiar attitude when you want to go home. Anything that stands in your way, it just better shift out. My wife gets neurotic for about a week. The kids hate it. The week before I come home she has cleaned the house from one end to the other, washed the windows and all the things she hasn't done for ages. Why do we go through it?

DR. TEITELBAUM: That is the career spouse, right?

COL LEITCH: Right, and you keep doing this every four months and it gets very wearisome. It really must begin to affect the family, children, everything. If you are doing that once or even twice a year, it is an unnatural way to live.

LCDR STAAB: I think the Navy spouses and the Navy families get used to the sea/shore rotation. Many of them prefer the long deployments rather than these shakedown cruises where they are out and back and out and back. It is the reunion that is far more difficult. There is a very brief period, especially among the children, when the ship first goes to sea, but the reunion is much more difficult.

I think the other thing that is difficult is when the tempo of operations for a given unit changes. When I was in Guam there was a drawdown and a number of the ships were at sea much more frequently than they were used to. That caused some problems. Both the ships and several squadrons were gone more than they were used to. The changing in the expectation was a difficult thing, especially when it was confined to only one or so of the squadrons of ships that were there. It is a different thing mobilizing for war when everybody is all doing the same thing. There was this sense of unfairness; of, "why are they going and we are not" and this kind of a thing.

COL LEITCH: There are all these peculiar things, all these emotions that, unless you sit 'round table and talk about them, they are forgotten. People will suddenly behave in the most appalling fashion. You think, "why are you getting upset about this?" "Well, because it is unfair. I am having to go and you are not." Yet, I felt the same way. I felt, "why me again? He's never been and why is it my turn yet again?" I do not believe that is a normal reaction for me, but there are times when I behave very badly when presented with a crisis like that. If we were all in it I would not care. It is the fact that it is me every time. My wife, I think, feels the same way.

We have to look very careful in contemporary and future operations at the tendency to split organizations down into small packages. If you have a whole married sub-element in the battalion or the brigade, and you send the engineers and the medics away, their wives really ask, "why isn't the whole lot gone? Why is it you? Why has she still got her husband at home? Why are they having a great time and I am alone?" It is a major problem when you live in military communities when part of the community goes and the rest stays.

Those left behind and alone genuinely feel that they have been let down. It doesn't help the man who has not deployed either, because they feel like they haven't gone. They see the looks from the other wives, you know. They won't go into the BX, will they? "Why have you stopped going in there?" "Well, because all those women whose husbands are away are all going to be in there. They are all going to be looking at me." Men feel like that. They do. You know, they've gone and I am left behind.

DR. TEITELBAUM: Based on what you said earlier, women who deploy should feel the same way.

COL LEITCH: I am sure they would. There will be some snide remark, "well, she is not gone because she can't cope or she told them she was pregnant or something."

DR. TEITELBAUM: The context is also characteristic. After Operation DESERT STORM, from what we saw in a survey, the feeling of victory they had and the response that the public gave them helped the reunion.

DR. MARLOWE: If it is a war, people do not have the same problem as non-wartime deployments. DESERT SHIELD, DESERT STORM was easy. We were at war.

DR. TEITELBAUM: We did not lose it until six months later.

CDR GRIEGER: I think there were some components to that in the medical corps that were a little different. When I was at Bethesda, half of Bethesda packed up to go man the hospital ship that floated throughout the war. There were problems for the half that remained and the reservists that filled the spots of those who had left. There were a number of problems and a lot of them gender-related. There were folks who had legitimate reasons for being taken off of deployment lists who happened to be women. The concern, and in some cases the reality, was that people said it was because they were women that they were kept back. People did not care that they had a medical problem or they were on a limited duty board or they were administratively needed for some things. It was that they were women and that is why they were kept back from the war.

COL LEITCH: We recognize that this is definitely going to be a problem when we have women serving in the armed forces.

DR. TEITELBAUM: The stereotype --

COL LEITCH: Yes, it is.

DR. MARLOWE: Yes, but very often it is an imposed problem. What we saw in Panama and DESERT STORM and what the Marines have talked about, were decisions that leaders made not to deploy women. The Marine leadership made the original decision that they would bring no women Marines into the Gulf because that would be offensive to their Saudi hosts. A month later they changed their minds very dramatically in part because of logistics system which did not work because all the key players were women officers. They were very up front about this.

I think what we saw in Panama was that very often it was the battalion commander who said, "I am not taking any of my women." In a number of cases the women went to the CG to announce that they were filing a complaint against the battalion commander. They were soldiers. They were going, too. If not, why not?

COL LEITCH: When you talked about social change, how the military has to adapt, the business of women and wives, and this business of operational tempo, one of the issues that has really affected us in a big way and changed almost entirely how we do our business, particularly as medics, is the impact of television on the battlefield and the ability of CNN to show people back home what is going on. It distorts enormously. If you ask my wife about the Falklands War, I was scared in the Falklands War. It is a horrendous place. It scared the living daylights out of me. People got killed. It was awful. No question about that, end of story.

The Gulf War was great. It was like being on the biggest exercise I have ever been on in my life. I drove a Toyota land cruiser with air conditioning in and four speaker stereo. It had a big red cross on either side and Paulie's name written down the side of it. I promise you, I have a photograph of myself wearing Merlan shades, crossing the start line, the line of departure. On the morning we crossed the line of departure and as the first American tank took off they played, on AFN (Armed Forces Network), "Born in the USA." It was like being on the set of a film. It was brilliant. It was a great war. As we just got started, and before you got really tired, it was all over and done with.

Ask my wife. The Falklands War was some little deal that happened down there. She has no concept of how frightening, cold and bloody it was because we did not put the television camera on the battlefield. We couldn't. The Gulf, however, was viewed in real time. She sat all night and watched it all night every night. I used to write to her and say, "it's really boring." She said, "no, it is not boring. It is really frightening." I wanted to say, "I am bored stupid. It is all sand." What she was seeing was so totally different to my picture. That is the effect it has on families at home because it is a total distortion. My children cried and were frightened. They weren't when I was in the Falklands because they did not know what was going on.

What it really gets down to though, and the way it really has impact on the medics, in particular, and how we do our business, is when you get hurt. I have this story which I will bore you with for thirty seconds because I know we are going to finish in a second. My father, the artilleryman, was hit in the leg by a piece of shrapnel at Alamein. It broke his leg and knocked him over. He was evacuated down the classic evacuation system; echelon one, two, and three and repaired on route. He eventually ended up in Alexandria about a thousand miles away which was very good for him, thank you very much.

When he got there, being a typical Leitch, he finally decides to write to his wife and say, "oh, dear Gwen, have been hurt. My leg is broken but it is fixed. Don't worry about it. It will be okay." From the time of wounding to the time she knew about it was two weeks. By this time it was all over and done with and he was up on a pair of crutches and getting fit again in Alexandria. That was 1942.

In 1982, forty years later, we had the Falklands War. From time of wounding to the time of me knocking on your door and saying, "Mrs. Sutton, I have to tell you about your husband," was two hours. Now, the first thing that happened when I knocked on the door and said, "excuse me, Loree, I have to tell you about John," was she would say, "how could you be so stupid as to get him hurt? How badly hurt is he? Where is he? When is he coming home?" If you cannot answer those four questions she shuts the door on you and she picks up the telephone and calls her mother. You have two people in the loop now. She then phones her father-in-law -- you have three people in the loop -- her sister. They all start saying, "where is he? How badly hurt is he?" and eventually they get bored with trying to ask the military so they then start asking the mayor who asks the governor, senator, et cetera. Eventually, John Sutton is at the end of a tube with everybody in the world wanting to know, "where is he; how badly hurt is he; and when is he coming home?" The answer to that question is on the next plane, because if you don't they are never going to shut up. You take this guy and you do the minimum repair on him. You put him on a plane and you fly him to Landstuhl and then you fly Loree Sutton to Landstuhl and then it all shuts up.

I genuinely believe that is the quantum change in military medicine. That is how we are going to be driven in the future. All the time we fight the sort of wars we are talking about; of low intensity with small casualties where everyone counts and everyone can be watched and everyone can be audited. The name of the game will be to get them home as soon as possible. If you don't, so much angst is created at home that the military just gives in. Replace him with somebody else. I think that is a major issue that is yet to be addressed by the people on the Hill or in the five-angled building, but it certainly affects us.

DR. MARLOWE: The Hill works. The second thing she does after calling her mother is that Loree calls her congressman. His senior staff then calls the Pentagon and there is a big flap. Where is he? Get him on the next plane no matter what!

DR. TEITELBAUM: Then the yellow ribbons go out.

COL LEITCH: Yes, that is why Landstuhl is as it is. We use Cyprus. If you want to draw some sort of analogy look at the history of Cyprus and the conflicts we have fought over the last few years and look at Landstuhl. Every time you go anywhere and do anything, we all go down to Landstuhl or to Cyprus. We all meet up there and we are all kisses and cuddles and CNN is there. The only time we have not done it is when we have been involved in a major conflict where we get them home fast. That is not the only reason but it is a major social pressure.

MAJ SUTTON: On that note, I would like to certainly thank you, Colonel Leitch, for coming and helping to educate us today. I think that deserves a round of applause.

Women as NCO's

Larry H. Ingraham, Ph.D.

We're pleased to have Dr. Larry Ingraham with us today. He has worked with us in many areas of trauma and disaster. He is presently Professor of Behavioral Science at the Strategic Decision Making Faculty, National Defense University. He also holds an academic appointment in the Department of Psychiatry at USUHS. He is noted for his research while on active duty in the U.S. Army. He served as Director of the Army Medical Research Activities in Heidelberg, Germany. After that Dr. Ingraham was Deputy Chief of the Department of Military Psychiatry at WRAIR (Walter Reed Army Institute of Research), and later the Director of the Behavioral Science Program for the Retrovirology Research Group at WRAIR. He presently is at the National Defense University.

We've asked him to discuss the issues of gender, command, and groups and how all those pieces interact together. I am reminded that he has a book in press, The Sergeant Major was a Lady. I imagine that we may be able to draw on some of that. Larry, we look forward to your discussion.

DR. INGRAHAM: Good.

PARTICIPANT: When are you going to do the study, "The Girls in the Barracks?"

DR. INGRAHAM: That was one of our big failures. We tried to do that after I left WRAIR and went to Germany. We had the wrong study director and the wrong research associates. The study just didn't come off. I suppose it could be done and needs to be done.

PARTICIPANT: There are so many untested, maybe even unrecognized assumptions about that socialization. We're looking at so much of it in terms of the gender interaction data. I know what a revelation it was as the material was being generated for the "Boys in the Barracks" before it ever became the "Boys in the Barracks."

DR. INGRAHAM: Right. The issue becomes where would you want to make the probe. When we did the "Boys in the Barracks," which was a participant observation study of four Army barracks, the focus was drug use. When we tried to replicate that with the women, we looked at one of the units in which we studied the men. The focus there was the initial placement of females in the unit. It was an MP (Military Police) unit. They had the first women MP's, which would have made it an interesting study.

Now, the question becomes, where would the study take place and what might be the focus? Way back then there were a number of those charming issues. The MAXWACS study asked, "how many women would it take to bring the organization to its knees, to collapse the organization?" It was phrased more nicely than that, but essentially it was, "what is the maximum number of women you can have in units without becoming dysfunctional?"

PARTICIPANT: What year are you thinking of?

DR. INGRAHAM: Mid-seventies, right at the dissolution of the Women's Army Corps (WAC.) I don't know which unit you would focus on. Clearly the Navy and integration of ships and the recent tragedy in California are studies that desperately cry out to be done. Again, what do we call it? It's blockbuster, right? The first family to move on the block.

PARTICIPANT: I think that's not what you study. That study allowed a glimpse at the norms of socialization in the barracks at the present time which was more important in a lot of ways than the information about the drug abuse.

I was trying to think of some major aspect of troop behavior, whether it's during free time or whatever, as an organizing focus for trying to put participant observers into units. That's the focus that you want to look at. Maybe drug abuse is not a bad one. I don't know what the problems are from the standpoint of petty crime within units. That's something that nobody really likes to deal with in the same way they didn't want to deal with drug abuse back in those days.

DR. INGRAHAM: Right, probably sexuality and sexual expression is something that terrifies the organization, as well.

PARTICIPANT: Yes. One of the things they talk about a lot right now is that the all volunteer force has led to an increase in married soldiers at younger ages. That poses problems for housing and so on. There are other issues which flow from that including marrying within units, the phenomenon of living together, moving off post, and single parenting. From all that, it may be possible to get some understanding about what normal socialization is now.

DR. INGRAHAM: It's an interesting model; the question of how dysphoria spreads and the concern about suicides in units. One could examine how dysphoria spreads in male units versus in female units. It would offer a window of opportunity around the excitement that comes up when you see suicide in clusters. The questions would be how do those clusters occur, how do they spread, and what's the social propagation of that disorder in that unit?

PARTICIPANT: Your hypothesis would be that --

DR. INGRAHAM: How does dysphoria spread in the other units?

PARTICIPANT: And in mixed units.

DR. INGRAHAM: I don't know whether anyone has studied the social structure among females in integrated units. I don't know how well it's documented but we do know that there is a social structure that is male within those units. I think most people are thinking about how well the females get integrated into that. My guess is that there is some kind of separate female social structure also and then there are a number of places where they do interact at different levels. It's not like there are these two armed camps necessarily.

PARTICIPANT: Right. One of the things that would come up from that, which springs to mind, is the whole issue of where females find mentors. One of the objections raised when the original Women's Army Corps was abolished was that there was a formal structure of successful women that you were supposed to be able to talk with, to counsel with, or at least watch from a distance. I'm not sure where the young female soldier turns for professional mentoring. We don't know that, good point.

DR. INGRAHAM: Yes, because the young finance major female was very high ranking in the old Women's Army Corps. It could be hard to find a female lieutenant colonel somewhere around on post that could provide that kind of mentoring.

The Sergeant Major was a Lady was based on a career history of a woman who came into the Army in 1962 and left in about 1982. She had about 20 years in service. She's now dead. Then I did a second interview, which has not yet been transcribed; that's the one that Major Sutton and I have been talking about transcribing. It was with a woman who came in in 1972 and left in '92. We see someone coming in at the time the Women's Army Corps was just in its full flower.

The first woman was of course confined to Adjutant General in terms of her training and the work. The second interview subject was in corrections. She was a blockbuster. She was the first female NCO (non-commissioned officer) of the Guard at Fort Leavenworth Prison. She did a variety of other stints around the Army in the disciplinary barracks and other things.

The conditions encountered for these two careers are really dramatically different. You could not believe the contrast in maybe a 10-year difference. The second came in in '72, the first in '62. The total attitude toward having women in the organization at all changed so much in that short time. In '62 there were actual regulations as to how far the women needed to be housed from the nearest male unit. All kinds of fences had to be required and secured. The big deal was how would you provide fire doors that opened out and were used only in the event of fire, et cetera. There were true career impediments in terms of the kinds of assignments available and what rank was obtainable. It was very difficult for a woman through the sixties to ever get beyond major. There were a few colonels, but there was a real ceiling. It wasn't a glass ceiling, it was ironclad if you were female; don't apply, don't even think about it. That's what changed almost overnight, in relative terms. Of course, The Sergeant Major is a Lady talks about the gender desegregation of the Army, which essentially happened overnight. The order came down to integrate the units.

PARTICIPANT: What was that like for her? One of the things we've talked about is the experience of culture change. Clearly as we try and extract categories out of this, one category is how does culture change and the other is what is the experience while it changes. Then the culture is in transition, which probably is where we are at the moment, after the initial switches in culture that happened. Did she describe some of that experience? In the second one, did she describe the experience of the present culture? What are its stresses or strains? The mentor role that you talked about fits that category.

DR. INGRAHAM: Yes, well let me take up the mentor role because that comes clearly to mind as we talk. The first woman, Jane, grew up in a world in which the women were segregated. They would have their own barracks. The senior NCO's were forced to live on post up to 1968. When you went to the barracks, there might be a kitchen where senior NCO's would fix supper because they would rather eat with each other than go to the club and put up with the harassment. It was not unusual for a young E-5 to sit and have dinner with an E-7 platoon sergeant or the first sergeant. If it was somebody like Jane then clearly you would see a mentoring experience where the older woman would say something like, "let's have a cup of coffee and let me quiz you on your next promotion."

Interestingly enough, both of these women had their first assignment on recruiting duty. Jane was out there with two senior NCO's who really kept her in line. Diane was pretty much on her own. All of that structure evaporated for Diane. Diane was the second one and experienced the dissolution of the WAC. This might account for some of her difficulties later, including difficulties with alcoholism and the extreme stress that she was under because she had only males to compare herself with.

PARTICIPANT: What you're saying is that in the 1962 scenario, because the women were isolated from the men, there was more interaction across ranks so that a young woman would have more senior women to talk with.

DR. INGRAHAM: Yes, potentially.

PARTICIPANT: But after the integration, that no longer was true.

DR. INGRAHAM: That's the hypothesis, yes. That was far less common. Now, there is also the factor, simply, that after 1967 you didn't have to live on post anymore. That's the confounding. You can't sort those things out very directly.

PARTICIPANT: You've lost some of that military, general interaction of junior enlisted and junior officers. I don't think we see as much in the military of people reaching out to the younger people and saying, "let me show you a way to get to where you want to go."

DR. INGRAHAM: Maybe so, I don't know. This would bear some examination.

PARTICIPANT: I don't have any data either to support that. It's just my observation.

DR. INGRAHAM: Of course when we take up a topic like this, my thoughts immediately go to these Navy units, in which there would be very few women. It's not clear, on a carrier with 5,000 people with all of their different compartments, how you would find any kind of contact. I would suspect you would feel awfully isolated as a woman.

PARTICIPANT: How did these women develop professionally as an NCO? With the Army, why did they stay in the Army?

DR. INGRAHAM: Well, lots of them had real trouble. Clearly, the incidence of alcoholism was often very high. Those that stayed were able to make tight identification with the Women's Army Corps because the opportunities for rotation were so limited. All the women were trained in the Army at Fort McClellan in Alabama. Jane describes her career-long struggle to avoid assignment to Fort McClellan. If you ever got there, you never got out. Not only were you then confined to a barracks at McClellan, but there was also a whole section of the post that was pretty much fenced off. Your entire life was defined by other people in the Army. If that was suitable for you, you could then craft a social and occupational identity from that. If it was not, that became enormously depressive. You coped with it as best you could, but oftentimes dysfunctionally with alcohol.

PARTICIPANT: And the second woman? There was no Women's Army Corps.

DR. INGRAHAM: No. I see her at loose ends as someone who finishes basic training and is then put on recruiting duty. That's a crazy assignment. You know nothing about an organization and you're out recruiting. There was no senior woman to keep track of her. She was working in an organization, filling out expense vouchers, and going from city to city and expected to behave in a mature way. The alcohol got to her awfully quick. She identified not with the women, but the Army. When she finished recruiting duty, I believe she went to Fort Riley at what was then called the Retraining Brigade. The Retraining Brigade was an attempt to salvage people who had disciplinary trouble. It was basic training all over again, but double the standards.

PARTICIPANT: You've got to love it.

DR. INGRAHAM: You've got to love it. That's where she went. She was the first NCO at the Retraining Brigade. The way she was able to deal with the alcoholism and also to craft her professional identity was to say, "I will run farther, I will stay up longer, I will do everything you can do, only better."

PARTICIPANT: I wonder, from your cases and your work with the "Boys in the Barracks" and general knowledge, what your thoughts are on the discussion we were having this morning. Actually, the thought was presented by Dick Fragala from an Air Force perspective, but I think it warrants talking about. His picture was looking specifically at nurses in the Air Force. His issue was the leadership and the culture and the identification with the leaders. He was contrasting two different groups. The identity of the first group was much more formed around this, "I can do it better than you can" syndrome. The other one was much more formed around the broader picture of authority and leadership where a military woman was seen as someone who had a family, who interacted with the entire unit, and who had a different style of leadership and authority.

He was contrasting the question of the transitions and how those styles of leadership may change over time. Additionally, he examined which ones we teach people, how people learn them, and what happens over time so that we can have the fullest breadth of that cultural expression of authority and leadership. In transition times, we see these changes from one style to another style.

I was reminded by your description of the formation of her identity in that unit; the "I can do it better" identity which is in contrast to the earlier mode that was being formed whether it was, "I can do it better" or whether it was, "we are here and we're going to succeed." It was something about identifying with the women in contrast with the Army. Identifying with the Army required a different set of requirements in order to do it versus identifying with the WAC's.

DR. INGRAHAM: That's very complex, I don't know.

PARTICIPANT: One way to phrase it would be, "How did these two women develop from the standpoint of ability to express authority? What was their style? How did they lead? Where did they learn it? Was it different?" You can have a leader who leads through working with the group and a leader who leads primarily through modeling.

DR. INGRAHAM: I think the retraining environment is interesting. You don't have to establish yourself as a leader in quite the same way. Style is irrelevant. Even though they've got schools for drill instructors, one has the feeling that it's not the school that turned them into the drill instructor. It gave them some skills, but they arrived there selected. They were pretty much prepared to behave in certain ways.

PARTICIPANT: Did women attend drill instructor schools? In the Air Force, did they have a senior NCO Academy?

DR. INGRAHAM: I don't know about these, but yes, women have gone to drill instructor schools now for a number of years. What is it about soldiers, regardless of gender, that would make them candidates to be that kind of trainer? That might be one thing to look at. It seems to me there's a cookie cutter mold for that. Whereas being promoted is different from being identified as a kind of person suitable for drill instructor or being attracted to applying to go to be a drill instructor. Those are two completely different things. There comes a particular time when the bulk of the people go through professional military education. It's the real misfits that in a way are not selected.

I think there's some merit in looking at where people self-select and what kind of behavioral model they're following. I don't know how she got to be the first female NCO in Retraining, but my guess is there was some combination of self-selection. She probably had certain characteristics and did well in the training course, too. It may have been as simple as wanting to put structure in her own life.

Let me share a hypothesis following up on your point, Bob. I suspect that women have about the same range of leadership styles as men. Although, I clearly got the impression, in talking with both of these women, that there is something to the hypothesis that women are generally more nurturing and approach the world differently than men. On the other hand, you would have some Army nurses and Army WAC troop pushers that were every bit as mean as anything that males could turn out. I've always carried a hypothesis with me, and I've not known how to test it, that in terms of leadership, the single most important relationship is the one right after initial entry. If the individual forms a positive cathexis with the platoon sergeant, or whatever position depending on the service, there's a positive identification. If the person in charge takes an interest in you, that's the way they describe it, then the individual spends the rest of their own leadership career attempting to replicate that feeling. They will go out and find skills that will enable that feeling to be reproduced. Different leadership styles evolve if the individual does not form a really positive cathexis, but has an okay time. "It wasn't bad, it wasn't good, and it wasn't awful. Sergeant so and so was okay."

PARTICIPANT: Or you may have survived a terrible one.

DR. INGRAHAM: Alright. In that case, you lead with the book, you do what you're told, and you try your best. Sometimes you're pretty good and sometimes you're not so good. The words are probably right but the feeling and rhythm isn't there, right? You can teach them the techniques but that larger emotional template of what it's supposed to feel like when it's going right isn't there. Now does that make sense in terms of some of your other experiences in units? I've always had the sense that that's the way it works.

PARTICIPANT: This can't be corrected later on during a career?

DR. INGRAHAM: No, I get the sense that there's almost an imprinting, a critical thing. It might be interesting to look at it in other contexts as well; for instance, the first elementary school teacher in a classroom or something like that.

PARTICIPANT: When you hear kids talking about the teacher who took an interest in them, however that is expressed from the authority figure or received by the individual, even though the perceptions may be flawed that seems to be a very formative and important thing.

PARTICIPANT: There's also a personality type in which the junior person in some way contributes to that bond forming. In other words, this may be the wrong word, but some people elicit social support.

PARTICIPANT: You also have the guard-all, shield types that resist any kind of interest. You may identify only with other people who you see are similar to yourself and don't let anything get close and that may imprint also. Whether it's NCO's or officers, that style may not be good leadership, but people can be successful in spite of being unprincipled and untrustworthy and so forth. The value judgment part has to be factored in separately from what the leadership style is. Whether it's something we would decide is really good and appropriate, as opposed to whether somebody can successfully survive in a series of leadership positions. All the troops may hate them, but if they accomplish the mission or whatever, then they are valuable to the organization; it's like the corporate barracuda. Maybe your imprinting hypothesis goes even farther.

PARTICIPANT: When you were talking about being predisposed toward leadership rather than merely being trained as leaders, do you find the same traits and characteristics underlying that predisposition in both men and women? In other words, if you could identify personality traits that led to leadership, would you find that the same ones lead to leadership?

DR. INGRAHAM: How are we going to deal with the word leadership? Does leadership mean being in charge or having progressed far enough to be in charge? Or does leadership mean in addition to having the rank, in fact being recognized by the followers as a leader as opposed to merely a senior person? I think there's a real difference.

PARTICIPANT: It requires different skills.

PARTICIPANT: Do leaders only need to perform at a level acceptable to her or his supervisor? That may have nothing to do with how well they do with the followers.

DR. INGRAHAM: That's why I would prefer to see leadership as a property of systems and of teams, not of individuals. If you invested in individuals, then you're faced with the awful question of why can an individual do so well in one situation and bomb so horribly in another? Look at George Patton, who was a marvelous combat leader and once the war was over had little political insight as a constabulary general.

If leadership is a property of the system, an interaction of the talent, skills and abilities that individuals bring to the situation and the system of relationships that exist, it seems to me that you have a much more fertile and colorful palette to work with. We can imagine some situations, like the D.C. city government at the moment, that's not conducive to positive change through any leadership. It is just beyond anyone; as in the basic question of "is this a job a human being can do?" I'm convinced that the mayor of Washington, D.C. is one of those jobs. A human being cannot do that job. The independent commission set up to fix D.C. will do the bad or tough work of trying to pull apart some of this network of little spider webs that runs across the bureaucracy in such a way that it's paralyzed; it's like a government mechanism with Alzheimer's disease right now. The commission will pull that apart and make it possible once again for personalities and social structures to interact with one another, if that makes any sense. That's how I prefer to view it.

PARTICIPANT: You commented about the range of leadership styles being similar in women and men, which makes sense to me. It's a good hypothesis, better than many. How does an institution select which type of leadership style at any given time will be of most use, such as Patton? At one time a person is selected that clearly represents a particular style of leadership, while at another time, in garrison, a different style of leadership becomes either more functional or certainly more likely to be selected; regardless of whether or not we know it's more functional or not. How does the institution make a decision?

DR. INGRAHAM: There are two possible answers to that. One is that the system doesn't choose, it's just random. The object of the game is to have enough of everything so that in an emergency you've got somebody who can rise to the occasion; keep a general around with brains and ruthlessness just in case of war. But that doesn't really get at your point, that's too flippant.

PARTICIPANT: Military schools are trying to get leaders to understand that there are about four leadership styles that are necessary. You need to identify the situations at hand and then shift your style accordingly. If you come into an organization where you don't know the people and things are new, then obviously you may need to be more dictatorial in order to direct people along the lines that they need to accomplish tasks. However, as you progress and your organization progresses, you reach a point where you understand the capabilities of the individuals in the working parts of your organization. Then there should be somewhat of a laissez faire attitude of allowing the individual to do things on their own in order to "develop" other leaders. Which is part of what I said before, because I don't think we reach out and develop those people to a certain extent. That's the schoolhouse, textbook answer. In between, you have the two styles that go along with that.

PARTICIPANT: It highlights the desirability of changing a leadership style as opposed to the structure.

PARTICIPANT: Yes, the good leader is not the Patton who can only command on the battlefield, but the people who can basically transcend all environments and do well in all types of situations. How you teach that to everybody is the difficult issue, whether it's females or males.

PARTICIPANT: I wonder if any work has been done on comparing male and female reactions to traditional approaches to teaching leadership. Is there really some cognitive dissonance, if you will, in using the so-called, "tried and true" approaches? I bet there is.

DR. INGRAHAM: Yes, but what kind of leadership instruction have you had? What do they do in the advanced course?

PARTICIPANT: Far and away the most effective training I had involved both modeling from a distance as well as direct, one-on-one mentorship. At least in my experience, I haven't been able to discriminate any particular gender bias or bent to that.

DR. INGRAHAM: What you've seen and what you've heard as people explain and present the various theories makes sense or is acceptable.

PARTICIPANT: Right, it is. Actually, early on in my career a mentor told me something that I've carried with me for a long time. The point made was to compare it to sports. You want to learn the fundamentals, then you want to develop your own style that makes it uniquely yours. The second point was that there's never a failed opportunity to learn about leadership unless you reject learning leadership. In other words, if you're just moaning and groaning about it, you're missing the opportunity. Every experience you have, you can either learn what you want to be more like or what you want to be less like. That's carried me through a number of tough situations.

DR. INGRAHAM: Did any of your female peers have any response to the models that are put up there?

PARTICIPANT: It's an interesting question. My first four years in the Army on active duty were in residency training. There were no other women residents or other women faculty or staff. When this issue of shortage of women residents, staff and faculty was raised, it was very interesting. I didn't bring it up as a woman, but my peers did. The way in which the staff initially approached the issue was to focus on me. "Maybe we should bring in some other women so that Loree has a chance." I said, "It may be good for me, but the rest of the staff could benefit from this other perspective as well. It's our learning, as well." I didn't have anyone to talk to about women's issues but I talked with my male peers at great length. We formed what we called a zone defense, because man-to-man the department had a history of "taking people out" by finding the weak link.

It's hard for me to speculate on this. I'm trying to think of units that would have a larger number of female peers. I guess some of the medical units for the enlisted may be that way, but I haven't had that opportunity to really talk with a female peer and compare leadership styles.

PARTICIPANT: I was thinking about what you all mentioned earlier about some women being very hard core and driving. My wife has been in the Nursing Corps for a while. The Nursing Corps has, over the years, had the reputation for "difficult" senior nurses.

DR. INGRAHAM: Very destructive.

PARTICIPANT: There might be some data bearing on that at the service academies, though, Craig. That's where I would look.

PARTICIPANT: That's a good point. At least in Armed Forces staff college, I Camp and so forth, there were so few female peers to talk about these things. The other thing was the level of cynicism, which was very high. People tended to say, "I've heard that before." I think your point is that looking at the early leadership exposures would be a very important thing to do.

PARTICIPANT: If I'm right, that's what provides the template for future development.

PARTICIPANT: We have to stop thinking about the medical basic officers course as an example. Do we teach anything in terms of the other side of the coin, in terms of the ability to follow regardless of gender? I'm sure we don't.

DR. LLEWELLYN: Yes, over at least the last five years and maybe longer, there are the repeated corollary statements, "you can't be a good leader unless you're first a good follower." I'm not convinced that there's much decent instruction about what being a good follower entails. The issue certainly comes up with medical students because none of them are conditioned to be followers. The only way they get into medical school is not being a follower. If you want to see a laboratory with enormous stress, you should go down to the Quantico exercise with a first year student. There are pup tents on the ground and so forth. They haul their gear, are responsible for a weapon and a steel pot and are in charge of other people. Very few of them have ever been in charge of other people unless they're on active duty. Having responsibility for a squad for six hours at a time reminds me of a classic description -- trying to command medical students is like herding cats. You don't have to tell them before hand.

PARTICIPANT: The guy is ready for hospital command.

DR. LLEWELLYN: Yes, a committee approach won't work. I mean it becomes very clear very soon. The easy things are very hard to do. They've all been taught. They've answered the same questions properly. There is the constant attention to hydration and heat. You get close to black flag conditions where you have to curtail training. Just the nickel and dime stuff gets difficult. Are personnel accounted for? Not to mention personal accountability; "oh my God, where's my helmet, I think I've lost it." One time down there we had somebody lose a weapon and we did it by the numbers. "Everybody out of bed, fall out." They're looking around and the CID came out and so forth. The stress that is engendered at Quantico is great. We have people in the first year class talking about it now, "I hope I do alright at Quantico." We tell them that we haven't had a failure there ever and that the injury risk is extraordinarily low. We had one person who was unable to complete because of an injury. The big thing is not just being out in the woods, it's being in charge of other people.

It seems to me to be an equally shared perception between the males and the females. There's a significant slice of women in the class. They do extraordinarily well as do the men. When you talk about leadership, you talk about first impressions and being in charge. They look for somebody to relate to. The thing that people fear more than anything is embarrassing themselves, particularly with peers.

PARTICIPANT: Clearly the question is visible shame.

DR. LLEWELLYN: Yes, here's a place where you're going to be visible repeatedly. They know how cruel they have been to each other about other people they think are "bozos," teachers or administrators. "Maybe they're all giggling about me." I'm assuming that both the experience and the reaction of the followers turned leaders is the same across the two genders. Suddenly, the shoe is on the other foot. I don't have any data.

PARTICIPANT: This gets a little too reductionist, but if, in fact, one of the issues of learning to lead is that of the management of potential shame and management of comfort with disability, you can then ask and look for differences. Clearly there are ranges in both sexes. There's no reason to think they're necessarily the same in terms of the mechanisms.

PARTICIPANT: If we were able to get enough data to inform males and females about what this spectrum is, in a number of areas of shared activity and shared training, maybe it would be useful in reducing some of the stress. Clearly you don't want to get rid of all stress, but it would be good to know what the stress-generating items and topics are and to be able to share that common knowledge base. Do we have any evidence, anecdotal or otherwise, of particular stresses on women these days in the service?

PARTICIPANT: Otherwise, why is Congress spending all this money?

PARTICIPANT: Actually, it raises an interesting issue. Our primary question is not just what's going on with leadership, which is an important question, but also how does that evolve and how do the cultures change? How do institutions develop leaders? Really, it's the next step beyond that which makes this, in some ways, even more tenuous; which is, what does that have to do with health or illness? The Surgeon General would be asking us this question in contrast to the Commander-in-Chief. Do these issues about leadership and mentorship impact on health behaviors? It doesn't necessarily have to be disease, but it might be the process of disease onset. It might be the way in which disease is identified or presents or doesn't present. Does how many people you've got in the barracks and how many people sit around the table talking affect how often influenza or tuberculosis spreads?

Clearly in the combat arena, I think we can, without too many difficulties, relate issues of leadership abilities in the health care sense to risk, morbidity and mortality. I don't think it's so clear to identify which ones matter and which ones don't. How do these social structures influence health? It in some ways backdrafts to that original question of the propagation of dysphoria, the epidemic of suicides which we talked about. HIV is another area clearly where the issue comes up; propagation and its relationship to social structures. As far as presentation for illness, do women NCO's come into the clinic as often as men? Are they inhibited to come into the clinic or are they more likely to come into the clinic? They come in saying they've got a sprained ankle or a sore throat, which represents use of hospital resources regardless of whether or not it's related to the disease process.

PARTICIPANT: We don't know any of that.

DR. INGRAHAM: Unless you do.

PARTICIPANT: That's another study you haven't done?

DR. INGRAHAM: That's right, that's another study I haven't done.

PARTICIPANT: The Navy did a study a couple years ago, on women and time missed from active duty for pregnancy. I think it's what they were really focusing on.

PARTICIPANT: They did shipboard sick calls.

DR. INGRAHAM: The last three seminars we've had were extremely specialized topics such as hostages, prisoners of war, service academies, and medical students. Those are all extraordinary groups of people. The generalizations from those are less likely to be applicable beyond that group.

PARTICIPANT: Well, some of it may be useful because of the similarity in the groups under study over a period of time. For instance, looking at the difference in percentage of people who have completed high school who are coming into the all volunteer force, it's not just whether they completed or not, it's how well they completed high school. There is a wide spread in all of that. Depending on the opportunities to use money from the military service to go to college, you attract different subsets of people also. I've been struck by the differences in the enlisted people who have been supporting us down in Texas, talking to the ambulance drivers and so forth. There seems to be a change in the last two years in the numbers of people who were in, specifically because they were going to go to college somewhere down the line. This is as opposed to the numbers of people who were in because they don't want to work in McDonalds. We're talking about very different subsets of the population, which may confound observations a lot more than if you're looking in groups that are more apt to be similar over time. I don't in any way argue with your point that these are unique groups, they're highly selective.

DR. INGRAHAM: The point we're struggling with is what's the phenomenon to be explained.

PARTICIPANT: Yes, I guess we are.

DR. INGRAHAM: That's what I don't yet appreciate.

PARTICIPANT: There are examples of those phenomena. They're so gross, they hardly warrant explanation. It is true that, inside and outside the military, the rates of depression are higher in women. It is true that, inside and outside the military, the rates of suicide attempts are higher in women. On the other hand, in the military, the rates of substance abuse are lower in women. I don't remember, whether or not the rates of substance abuse of women in the military are the same or lower than those in the civilian appropriate comparison group. Dave's question would of course be the cohesion one and the relationship of cohesion to risk of traumatic stress breakdown.

DR. INGRAHAM: Yes, but these are all searches for a phenomenon. If you don't have any difference between civilian and military, what's your phenomenon to be explained?

PARTICIPANT: You want one that's different from civilian and military. I don't think that's been tasked. What has been tasked is gender. It seems to me there's an inherent assumption that there has to be stress. There has to be some kind of identifiable problem associated with the fact that nobody can document the absence of obstacles to women in the military, progressing through the full spectrum of ranks. Since you can't document that there are no more obstacles for female officers or female NCO's than there are for males, controlling for ethnicity, et cetera, et cetera, et cetera, then that must generate stress. I'm not saying that this is my posit. I think that is where a lot of this is coming from.

If we can understand where that is generated and in what ways it's manifested, then maybe changes can be made. We can also deal with what can't be changed from the standpoint of understanding that this will produce either attrition or a predictable demand for certain kinds of services. It's a congressional sociology, not one that anthropologists, sociologists and so forth would subscribe to.

PARTICIPANT: I don't think the focus is necessarily that the military stressors on women are more than the military stressors on men.

PARTICIPANT: Regardless of whether the stressors are more or the probability of dysfunctional response may be greater, there are a whole series of variables which must be disproved. You asked, "what's the phenomenon we're looking at?" It seems to me that the phenomenon we're really looking at is trying to prove the negative. Somebody is going to want you to be able to say that there are no greater risks to women, no greater hazards, and there is no greater stress. Probably the only way to go at that is to start with the null hypothesis that that's true. Assume no greater effect for one side or the other and try to make measurements. Some of the measurements that are made, then, are how often males and females go on sick call.

I remember the debate about the shipboard studies that said one of the reasons that women might have been going on sick call more frequently had to do with the ways they were billeted. There were several hypotheses. For example, they weren't able to get birth control pills or they couldn't get their prescriptions refilled for a long enough period of time. They had to concentrate on whether there was any illness or not. Nobody controlled for whether different sections of the ship were experiencing different rates of respiratory disease and those sorts of problems. Women were clustered in their billets, whereas males were spread out through the ship as was their risk of contagion. The only thing that was remembered from it was that the medical attendance rate was much higher for the embarked female sailors than it was for the males.

I think one of the other things was the difficulty in access to heads (bathrooms) because they couldn't just put a bunch of new ones in. In some ways, they were saying that they were getting the same behavior you get in some field exercises where women don't go to the bathroom or women don't consume the same amount of food, even though they know they should. The rationale is it's such a pain in the neck or embarrassment to traipse up and down the ladders and so forth. Then the result is cystitis or sometimes vaginitis. The other variable they couldn't compare with was data on the attendance rates in shore-based clinics.

DR. INGRAHAM: Once you have a phenomenon, look at all the studies you can do. Otherwise, what we've been talking about is where there might be differences. There might be differences anywhere for any kind of reason, to include we looked at it wrong.

PARTICIPANT: If we had something to look at like the "Girls in the Barracks," there might have been some phenomena that were observed, not quantitative, that we might then look at in considerably more detail.

DR. INGRAHAM: There we were looking with respect to drug use; that was the phenomenon. I think you're absolutely right that largely the substance of that study had nothing to do with drug use, but it still provided the organizing schematic for the observations. I suppose I threw out lots of information because it didn't bear on drug and alcohol use.

PARTICIPANT: We don't have an organizing cluster of phenomena.

PARTICIPANT: I was reading about orthodoxy versus heresy, and I was thinking of this group particularly in the context of Colonel McCarthy's earlier presentation. She was an Army nurse who talked to us about nursing in World War I through the Korean War. The female officers were continually told, "you can't do this, you can't do that, you can't be accepted here, and you can't be accepted there." It seemed to me that part of the struggle in this whole thing is the orthodoxy of the military services as well as society. You see the barriers that are set up and the effects of those barriers. We have an orthodox point of view, whether it's leadership, education, or field training which contends with whatever the heresy of the week is. For instance, there was an outlandish proposal on Women in Combat that somebody has made about making guns lighter or why can't you make tanks lighter?

PARTICIPANT: I must say our issues are much smaller. They focus down to issues of health, illness and disease and their relationship to trauma, contingencies, and deployments. Our bottom line is it's a disorder-driven question about rates and incidences of illness. First off, are they different, and if so, why are they different? The issues to ask about leadership from this particular perspective are, do they contribute something to our understanding of mechanisms that might be involved? If one or two months from now or 20 years from now we decide to look for a mechanism for why suicide rates differ between men and women in the military or compared to the outside world, will leadership be one of the places we look at? Is mentoring going to be one of the places we look at? We suffer in part from our strategy, which at the moment is the broad based, listen to everything, hear everything and wonder about everything. Our long term goal is enlightenment somewhere as we narrow down to the questions of most interest.

DR. INGRAHAM: I'm trying to reflect back on these two career histories that I did about gender issues and what came up health wise.

PARTICIPANT: What about alcoholism? You mentioned that.

DR. INGRAHAM: That strikes me as a big one. I wonder back in that time in the Army if it was any different than for the male officers?

PARTICIPANT: Was this in fact a successful adaptation of one of the ways you achieved identity, in the same way that junior officers in the 82nd Airborne Division were expected to get smashed Friday night? When you say alcoholism, was this incapacitating, interfering with the job, cause for some disciplinary action or something like that?

DR. INGRAHAM: Well both, we've got cases --

PARTICIPANT: In the one you're talking about.

DR. INGRAHAM: No, she went on and became a very successful sergeant major.

PARTICIPANT: Did she get into a 12-step program.

DR. INGRAHAM: Yes.

PARTICIPANT: Did she have a male or a female as her --

DR. INGRAHAM: Sponsor? Female I believe.

PARTICIPANT: Was there an indication of alcoholism in both of the women?

DR. INGRAHAM: No.

PARTICIPANT: Just the second one?

DR. INGRAHAM: Right. Nothing health-wise really springs to mind. The first woman died of cancer, and who knows how to track that back. She survived a stage five cancer for 10 years, not too bad.

PARTICIPANT: Did it manifest itself just at the end of her career?

DR. INGRAHAM: Yes. So it's tough to discern.

PARTICIPANT: Both of them finished as sergeants major?

DR. INGRAHAM: Right.

PARTICIPANT: By Ed's criteria, we would have to reject their experience as atypical.

PARTICIPANT: I wouldn't say reject, just keep in mind.

PARTICIPANT: Because the percentage of the total NCO's who finished as sergeants major is so low.

PARTICIPANT: They could be included in the NCO senior leadership, the senior NCO court.

PARTICIPANT: When you're saying there was the problem of alcoholism and you can characterize some of the ways they lived, you don't see any major problem or remember any?

DR. INGRAHAM: No.

PARTICIPANT: I would almost assume that a woman who was successful at that level, because they didn't have special selection for women as opposed to males, would probably not have manifested or experienced many problems along the way. My assumption is that if you had problems, it would greatly reduce the probability of reaching that rank.

DR. INGRAHAM: That's an assumption I have and I don't have any basis for it.

PARTICIPANT: The other issue is, in my experience, people who are rising through the leadership chain, if you will, don't bring those problems out. If they have problems, we take care of them and sometimes they're not manifested as we think they would be. Then the people, themselves, are not willing to bring up the fact that those problems did exist.

I would think in the case of interviewing them after their careers that they would have no hesitation in relating any difficulties they had. Often with master sergeants and sergeants major retiring from the Army you go back and ask, "what medical problems have you had?" They say, "none." Then you go back and look at the book and find the bad knee back in 1969 or 1970. They go, "what bad knee?" You go back and you get, "oh yeah, yeah, I remember now."

PARTICIPANT: Suppression, denial.

PARTICIPANT: This is reminding me of physical shame.

PARTICIPANT: It really does boil down to that. If you condense it down, it's physical shame. In essence it is, "don't put me in any light that's going to make me look bad in front of my troops."

PARTICIPANT: Bad knees, et cetera.

PARTICIPANT: That's right.

DR. INGRAHAM: Health information, though, is dreadful anyway, in any population. I think you were right on the first question. We can't recall what happened to us unless it was really bad and then we try to suppress that. I tried to rotate and think about my current women students and what they complain about. This is the executive level.

PARTICIPANT: What percentage of women?

DR. INGRAHAM: I don't know what percentage it is, but it's reasonable and growing. This is in service and in the Federal Executive Service. The kind of things that they complain about concern treatment by men and being invisible. "Thank you very much for your contribution, now let's get on with the task at hand." Very subtly feeling that they are not always accorded an equal place at the table or an equal voice in the discussions.

PARTICIPANT: What do people tell you? Are these discussion seminars of some sort?

DR. INGRAHAM: Yes, but mostly in the non-verbal.

PARTICIPANT: No one sits and says, "well we tried this and we tried that."

DR. INGRAHAM: No. It's just a failure to listen quite as attentively or seeming to be a little bit eager to get on with the next point of discussion. That polite pause to soak in or convey the fact that you may have said something that was interesting is missing. Health-wise, those issues don't come up.

PARTICIPANT: One of the issues that Francie has actually raised that brought it to the fore is anorexia. I must say it's not one that I frequently think of as a military problem. There are issues about the way in which our community manages questions about weight and whether or not there are particular vulnerabilities in women more than men. Also, does the military actually have men anorectics more than in the regular population because of concerns about weight standards?

The question that derives from a piece of Carol's work at Norton Air Force Base, was to look at bereavement symptoms. The symptoms of loss of someone from one's unit are higher in those that are single with a significant other, versus married or single. There's no data out there about what are the rates in the overall military. It would be important to look at how those rates are different. Are there more men with significant others or women with significant others and does that create an additional risk factor for those types of environmental, unexpected events?

In the sample of body handlers at Dover Air Force Base, we don't have enough women at this point but we do know that there are more people who sought medical care, who felt that those who died could have been my friend. All those that died from the USS Iowa explosion were men. There weren't any women on the USS Iowa. Did that influence the question of, "could it be my friend?" If it did, would it then influence the probability of making use of medical care resources either because you are actually ill, or have higher stress? Do you actually get more sore throats? Does being around dead bodies make you think you are ill so you go and get a check-up? I think it's those kinds of questions. I "ain't got the bullet" to say, "here's the one where all this comes together."

DR. INGRAHAM: I wish I had any encouragement at all to offer. We struggled with this for so long looking at the sick logs. You remember the attempts to do the diary technique. It got hopelessly complex in the analysis.

PARTICIPANT: The bottom line I think is where we end up on this. I think there are only several conclusions to this overall project, which of course we're not going to say until we finish the project. There are no differences anyway in why we are asking this. Men and women are not the same. We need to find out how they're different. How should we be asking this question? I think that's what you're addressing. How should we ask this question so it is sensible and that science has something to bring to bear that relates to health. Rather than to say, "women get this disease; men get this disease; yes, you should study those diseases."

PARTICIPANT: A variety of people have been successful and achieved and so on and so forth. I think that it's equally, or perhaps even more important, to try to hear from people who haven't been successful. To at least try to find out why they think that they failed. What we don't do well in medicine, psychology, or psychiatry is predict success. We're much better at diagnosing potential for failure and flaws and cracks. We have a group of people, male or female, trying to do things that a smart assessment would say is going to be more trouble for this one than it is for that one. Not just because of carrying heavy loads or --

DR. INGRAHAM: What response would you get if, alternatively, you went to a chief nurse and asked about the health differences in their technical staff personnel, or if you were to go to the person who is in Adjutant General, or to the commander with the transportation and the signal and the other units? What would they say about the health differences in their areas?

PARTICIPANT: I don't know, a good question.

PARTICIPANT: What if you went to the chief nurse and asked, "how much time have your people lost due to pregnancy, and child care?" Then you might ask, "how many male nurses have recently had children? Wouldn't you be interested in having a better balance and so few males have time off for pregnancy?" et cetera, et cetera. You turn around some of the stereotypes. At least that's an area that there is sort of a glass ceiling as far as males are concerned. It might provide some useful insights. It fits along the same lines as what you're saying about asking about health problems. For some people, maybe not just health problems, but it relates to logistics or resupply or maintenance.

DR. INGRAHAM: Yes, you start out asking, "what's it like to command a mixed gender unit, now that we've 'gotten used to it'?" I'll bet the interview would take off from there.

PARTICIPANT: People postulate that if you don't have enough heavy lifters that that's going to slow things down. The comeback to that may be, if you have a higher level of technical facility associated with more females being on the job, maybe it goes faster and better. Maybe you have fewer mistakes.

DR. INGRAHAM: Maybe you build more cohesive teams where you can ask people to help and they help you.

PARTICIPANT: Going back to the original question of why do we get differences in health in men and women, the issue you raise about health differentials on-board ship is actually a nice illustrative example of thinking through the etiology of disease. For some people, the fact that women got different exposures because they're in different parts of the ship, says there is no difference between men and women. Then there's a whole other group that would say, "yes, there is. There's an exposure issue and the question is how do exposures occur in various populations?" Is there a risk factor that's related to exposure as to what may happen but unrelated to the biology? That, in itself, is of interest. Is that a fundamental difference between men and women? No, but it is a difference in health rates and disease outcomes in those groups that can warrant an intervention. The more fundamental question is where we fall down or other reasons why we get difference in health outcomes. Biology is the obvious answer. The one for which we have fewer answers, other than the most obvious that become trivial to us, is pregnancy issues. Women get pregnant, men don't. Men get other diseases, women don't. Frequently, those become trivial to us.

I guess what I'm trying to get to is the broader picture of health and medicine. It is in some way the necessity of the preventive medicine perspective and the public health perspective. All of those constitute the disease process. Recognizing the value of each one of them and how they may be gender different is important, not just the biology.

PARTICIPANT: We have a Chief of OB/GYN who comes over and does a lecture for us in the fourth year course on medical problems of women in deployment and combat. At the end, he has a nice five minute period where he poses a variety of ethical issues that I guess we're not ready to address, but that in fact should be addressed. If we know we're putting a force on long deployment, rather than have people concerned about losing birth control pills, having cycles upset, for people who in fact do have noticeable tremor with premenstrual syndrome and so forth, should there be a policy to put everybody on Depo-provera? Now you don't have to worry about menstrual periods. People who are doing radar tracking and so forth no longer have problems with attention span. It's not a value judgment as much as it is who is going to be willing to even raise this as an issue that's worth addressing.

PARTICIPANT: Yes. Unfortunately, if you raise the question like that, the implication is that this is an area of fragility or weakness as opposed to a biological difference.

PARTICIPANT: It also can be construed as a generalization. In other words, like generalizing something about a culture. Part of it could be coming from "Yes, some people have PMS, some don't," but it could become a big issue.

PARTICIPANT: You know that at the present time there is still not a supply system within the Army to make sure that sanitary pads are available for women who are deployed.

PARTICIPANT: Who uses sanitary pads?

PARTICIPANT: Pick whatever you want. The word that is put out is take enough for however long you're going to be away. Can you imagine that? It's like saying, "why don't you take enough bullets just in case you get into a fight."

PARTICIPANT: Maybe part of the point you're getting at is, what would be the response if you suggested that you give all the male soldiers a medication that would keep them impotent?

PARTICIPANT: But we do. This gets to exactly the issue raised. It's very difficult to phrase this question without it raising exactly those issues. We raise similar questions in Ranger school, or it comes up with pilots. Do we, in fact, put them on amphetamines for 72 hours. Yes, I know there's a good proportion of them that may become psychotic from that, but the demands of the setting may be that that's required. We're willing to talk about that issue. Can we talk about the other?

PARTICIPANT: But it's not talked about, that's my point.

PARTICIPANT: It's can we talk about it? I mean who is the "we?" Can men talk about it and women be okay with it?

PARTICIPANT: The level at which this is positive is can the system bring itself to talk about it?

PARTICIPANT: Sure, that's right.

PARTICIPANT: There are two options. How do you get the system to be able to address both options. That's the point.

DR. INGRAHAM: At last, a phenomenon.

PARTICIPANT: That's a fine way to say it.

PARTICIPANT: The discussion has centered around someone putting forth some edict that says this is what will happen. There is also the case to be made of, why don't we educate the people out there enough so that it is allowed as an option for people, which has not been there. Depo-Provera for instance, has been out there for some time as a valid form of birth control. There are still women who don't know about that and say, "tell me more about this." The pill has been out there and we need to give it a little bit more time before you can catch up to that. However, there are still women out there who have no idea about it in terms of what it really does, what it can do, what are the bad side effects, and what are the good effects?

PARTICIPANT: Is the medical department for the Army or any other service, willing to say "okay, we're not going to make the policy, all we're going to do is make sure that the information is there and the option is available." As part of your pre-deployment you can opt to have that done. If there had been a drug available to make troops impotent, I can imagine the reactions of some commanders in past history, at least, based on what they wrote about the impact of sexually transmitted disease rates.

PARTICIPANT: No question.

DR. INGRAHAM: In fact, the rumor was that's what salt peter did in those potatoes.

PARTICIPANT: Yes, and then the rumor is always that whatever prophylaxis you're getting for malaria makes you impotent also.

DR. INGRAHAM: Don't you see, this is the phenomenon. This is worth investigating. This is something worth going back to the Congress with, right?

PARTICIPANT: Bring me a social psychologist.

DR. INGRAHAM: Yes, sure. There are the dynamics of why we cannot talk about serious health issues within the context of our services and that poses a threat to the health of the services.

PARTICIPANT: To make these kinds of decisions, the question is whether or not they can talk about it from this perspective. One of my biggest fears and hopes is this conference can find a way to talk about these issues. Because it is very difficult to get people to talk about it. In talking earlier I was reminded about the use of CBW (Chemical and Biological Warfare) and the dosing. The dosing put a whole group of people at risk without much thought about it. It has to do with how much you weigh and we go by the mean. Maybe there is no better answer to that.

PARTICIPANT: As far as the CBW decision goes, there was the observation that there was an increasing percentage of females in the force. Since I was commanding the lab that was in charge of the antidote development, we had some obligation to look at what the down side was of women using the same dosages as men. They were all the arm injections; there was the question of does this interact with birth control pills. The message was, don't bring that up in any kind of setting. The reason was not that it was an unimportant question, but it was interpreted as ammunition for people who say that's another reason women shouldn't go into combat.

Interestingly enough, the Senate committee that deals with Veterans Affairs put out a report a couple of months ago that had to do with the DoD putting veterans at risk because of research that's been conducted over the last 50 years. This included the radiation exposure, the mustard gas, psychoactive drugs with unwitting subjects, and a lot of it focuses on pyridostigmine in the Gulf; not to mention the doses of atropine that were recommended as chemical warfare antidotes. They, at least, were able to get to some of the working documents. The argument for using atropine and pyridostigmine as a pre-treatment is that this gives you the best shot of survival if certain types of nerve agents were used. Well, that's true, but the amount of atropine you need is about four times what's in those atropine injectors. Whereas what's in the injectors does pretty well for VX, GB and for Sarin, for which you don't need the pyridostigmine. Here we've got this craziness of saying we're going to use the pyridostigmine because this provides some potentiation of these active antidotes. By itself, it has no effect.

Unfortunately, it isn't approved for this purpose so they did all the work with the FDA, trying to get IND's. We don't know how it will interact with other medications and we had no idea how this dose might affect somebody who was pregnant and didn't know it. You can imagine the operational reasoning at that time, which was, "if Saddam blankets this place with as much nerve agent as he's got, that may be hazardous to the health of the fetus also, and sure will be hazardous to the health of the potential mother. Let's try and give her any edge that we can." Of course, that kind of operational concern has no credibility, no valence at all once you're out of that immediate operational decision window.

In fact, prospectively, many things should have been done, but nobody is going to fund those studies now, either. It has nothing to do with whether it's related to effects specifically on females. It has much more to do with the fact that we aren't going to fund those kinds of studies any more in humans. We hope that nobody is going to use any of these nasty agents against us.

PARTICIPANT: Unless we're traveling through Pakistan, for instance.

PARTICIPANT: There are any number of places right now where by using the local pesticide industry you can come up with your homemade herbal agent.

Sociological Perspectives of Women in Policing

Susan E. Martin, Ph.D.

I would like to welcome Dr. Susan Martin. She is a sociologist who is currently working at the National Institute on Alcohol Abuse and Alcoholism where she is a Health Sciences Administrator in the Prevention Branch. She has been there from July, 1990 to the present. Prior to that, she worked at the Police Foundation. She has done considerable research in the area of women for her doctoral dissertation. In the late 1970's and in the 1980's she worked on issues of women in police work at the Police Foundation. She is currently completing a book to synthesize her work in these areas. Welcome.

DR. MARTIN: If you do not mind I am going to talk from a prepared script and my focus will be on barriers for women in law enforcement. To elaborate on the introduction, my doctoral dissertation was done in the late 1970's and in order to do the research I joined the Metropolitan Police Reserve Corps. I spent a year and a half on the street in a uniform with a badge slightly different in shape from the regular officers. I had mace and a night stick but no gun and no insurance either. I do not know why I ever did it, but it was quite an experience. I was in the Third District, part of the inner city. The Reserve Corps is a volunteer organization. I knew I wanted to do my dissertation on women in policing and so they let me volunteer. They knew I was doing the research but as long as I did what reserves do, they let me go out in the streets.

At the Police Foundation in the late 1980's, I did an update which involved the national survey and included case studies in five departments, including Washington, D.C. There I did not spend any time on the streets but I did interviews with over 100 officers. Each of these endeavors produced a book. I am currently working on a book which is under contract and will be used in undergraduate courses called Doing Gender, Doing Justice. My co-author and I are looking across the criminal justice occupations, at women in policing, in law and in corrections. I have tried to collapse the police women chapters from this newest book in this discussion.

Before 1970, nearly all police officers in the United States were white men. Women comprised less than 2% of the personnel and policewomen served in specialized positions working with women and children. In the past two decades, the number and the proportion of women in policing has grown as has the representation of men of color. Nevertheless, they continue to be under-represented particularly in supervisory positions. They are regarded with suspicion by many male officers and confronted with discriminatory practices within both the formal organization and informal occupational culture.

Today, I would like to briefly give you a bit of background and then focus on the ways the work of the police and their occupational culture contribute to continuing resistance to women. I will also discuss the ways that organizational arrangements continue to function as barriers and the ways in which woman cope with the situation.

Women first entered criminal justice work as jail matrons. The first woman in policing was hired in 1910. Until the mid 1970's, policewomen were restricted in number, paid lower salaries, selected by different criteria and assigned to different work. In 1972, the Metropolitan Police Department in Washington, D.C., became the first major municipal agency to put a significant number of women on patrol. Initially, they said it was an experiment.

Since that time, the number of women officers has increased substantially and now they comprise about 10% of municipal personnel. About one-third of the women officers are women of color. Most are concentrated at the entry rank although they are slowly gaining promotions to supervisory positions and constitute now about 4% of the supervisors. Montgomery County has a woman chief but this is most unusual.

What I would like to do now is focus on the nature of the work. The police are the gate keepers to the criminal justice system. They enforce the law and arrest offenders. In addition, however, they are expected to prevent crime, protect life and property, maintain peace and order and provide a range of services 24 hours a day. A common thread unifying their diverse activities is the potential for violence and the right to use coercive means to enforce the officer's definition of the situation.

Because of the association of police work with crime, danger and coercion, it has traditionally been regarded as men's work. The crime fighting aspect of the job is regarded by both the public and officers as the real guts of police work. In reality, however, most of what police do involves service or order maintenance tasks. Violence, even verbal aggression is relatively rare. Furthermore, officers must deal with people when they are at their worst, when they have been victimized, injured or are helpless or when they are guilty and trying to escape. They must restore order in volatile situations and they need effective interpersonal skills to understand and manipulate people rather than bravado to be effective officers.

Nevertheless, the combination of danger and authority to exercise force has resulted in a unique set of behaviors and attitudes among officers. This includes suspiciousness and isolation from the citizens in the community. It has contributed to the development of the unique and cohesive occupational culture which for many years was maintained by recruiting and selecting a homogeneous group of white, working class males who through recruitment procedures were found to fit into the group. Despite changes in the nature of policing and in the status of women in society in the past two decades, many male officers continue to believe that women cannot handle the job physically or emotionally. Therefore, many also believe that women should not be allowed to exercise the moral authority of the state or be integrated into police work. Beyond the attitudes of individual men, the work culture is characterized by drinking, crude jokes, racism and sexual harassment, as well as the demands that the women who enter it subsume male characteristics to achieve even limited social acceptability.

Men's most vocal concerns about women in policing usually are stated in terms of their physical capabilities. Nevertheless, the scope of opposition to women is far broader and deeper. In my first book, I argued that the integration of women into police patrol work as co-workers threatens to compromise the work, the way of life, the social status and the self-image of the men in one of the most stereotypically masculine occupations in our society.

Because women threaten the male cultural world including their work norms, group solidarity, and definitions of the work as men's work, they have met strong opposition. Since women tend to be smaller and weaker than men, the men focus on the physical differences between men and women. Yet, if one steps back, it seems that in one of the few remaining occupations in which strength and physical ability still are required for the work (if only occasionally), the assignment of women to patrol poses a dilemma. It implies either that the men's unique asset, their physical strength, is irrelevant or that the man who works with a woman will be at a disadvantage in a confrontation.

Men are not only concerned that the women provide less muscle to a partner, but that they are mentally weaker and unreliable. If women cannot be trusted to come to the aid of their partners in a physical confrontation they threaten one of the basic norms of police work. Consequently, the men assert that when they patrol with a female partner, they do so in a more cautious (and in their view), less effective way. Female officers are perceived to threaten the safety and effectiveness of the partnership. A study thirty years ago identified three sorts of underlying norms that are the core of police solidarity. One is the rule of silence; you do not squeal on others. The second is that you maintain respect on the street. The third is that you back up fellow officers. I was referring to the third of the three.

Female officers are perceived to threaten the rule that police should maintain respect on the street. In some instances, the uniform and the badge are insufficient. The officer's personal authority and the manner of conveying it are needed to gain citizen compliance. Men in this society are accustomed to viewing women as objects to be dominated rather than authority figures to be feared or obeyed.

PARTICIPANT: Which society do you mean, police society?

DR. MARTIN: No, I meant generally in our society.

PARTICIPANT: Is that documented?

DR. MARTIN: Well, I cannot think of a citation right now but I would say that most of the authority figures, certainly in formal organizations, are men and so the voice of authority in essence is a male voice. The voice of guilt would be mother's voice. Feel free to disagree with that. Conversely, women are not used to exercising authority over men, I guess one might say, except as sons or as parents. Even traditionally in marriage, the woman is joined to the man and women certainly are not powerless. However, I am making a distinction between power and authority here. Male officers, therefore, are concerned that male citizens will deny or resist female officers' efforts to exercise the authority of the law with which they are vested. Furthermore, male officers feel that challenges to their legal authority will rub off on the police in general so that they will undermine authority for the police and respect for the police.

Yet the alternative scenario, a woman exercising authority over men, is also threatening to male officers' identity. Certainly you see this in resistance to female supervisors. Female officers also threaten to expose the police myth which sustains the policeman's public image as a successful crime fighter. The female officer reminds the men that they can, to quote Jennifer Hunt, "only achieve illusory manhood by denying and repressing the essential feminine dimension of police work that involves social relations, paperwork and housekeeping in the public domain."

The presence of women also undermines the solidarity of the all-male group by changing informal rules by which officers relate to and compete with each other. The world of the men's locker room from which women are physically excluded is filled with sexual language and talk focused on sports, women's bodies and sex. Now this may have changed in the past 20 years. I haven't been in the men's locker room, but this banter fosters male bonding and men's sense of masculinity.

Because women are objects of much of the talk, they cannot participate in it on equal terms. If they ignore sexual jokes and language harassment, they are marginalized. Women who talk like men, however, are punished because when they tell sexy jokes, they blur the distinction between the sexes. Now, again, this was written 15 years ago and to some extent it may have changed. One of the issues that I think needs research is the extent to which it has changed.

The presence of women raises a specter of sexual intimacy between officers. When all police were men the department treated their sexuality as unproblematic as long as it was heterosexual. Sexual ties among officers, however, compete with the demands of loyalty to the group that is essential in work involving danger. The fear of competition causes organizations to try and eliminate sexuality and emotion from organizational functioning, in general, and particularly with respect to women.

Female officers also threaten to disturb the informal distribution of rewards because officers no longer compete with each other on equal terms. The rules of chivalry as well as the potential for abusive power through coercing sexual favors may come into play in a gender-integrated police force. Consequently, some men allow and some women accept exemptions and favorable assignments by taking unfair advantage of their sex.

The integration of women into policing threatens men's masculine identities by undermining the association of their work with masculinity. One way in which men reinforce their masculine identity is through the work; through having a job that is labeled masculine and by fostering the image of the work that they do as men's work. Gender segregation in the workplace, by preserving job activities labeled for men only, simultaneously reinforces their masculine identity. For example, for a man to rely on a male partner is defined as male bonding or camaraderie. Reliance on a woman, in contrast, is viewed as a sign of weakness and therefore unmanly. Thus, the presence of women poses a bind for a male officer who wants to depend on his partner but does not want to depend on a woman. For many men, the simplest way out of this bind is to exclude women from patrol work. Since that is no longer possible, except in very small departments, the most vigorous opponents of women tend to deal with their presence by simply avoiding women. The rest appear to view good female cops as the exception and treat women as a group as outsiders.

In sum, the nature of police work, combining danger and power over the formal mechanisms of social control have resulted in an occupation closely associated with masculinity. Male officers have opposed the integration of women into their ranks as a threat to their definition of policing and as the source of their social status and an enhancer of self-image as "men's men."

If we turn now to the barriers to women officers in terms of the interactions, one finds that men express opposition to female officers through interactional patterns that marginalize or exclude women. Women's social isolation then denies them mobility opportunities since they lack information, mentors, skills and even a sense of comfort on the job. Women also encounter high performance expectations and paternalistic treatment which creates double standards and they face omnipresent sexual and gender harassment. Each of these barriers is also affected by race and ethnicity as well as gender.

The resistance that the first group of women on patrol faced was blatant, malicious, widespread, organized and, indeed, sometimes life-threatening. Many of the men refused to teach women skills that are routinely imparted to new men. They failed to respond quickly when women sought backup. Supervisors overzealously enforced rules, depressed women's performance evaluations, sexually harassed them and ignored their mistreatment by fellow officers. Such discrimination and hostility are neither as open nor as widely tolerated today. What I am looking at now are the interactional barriers to women and then I will move on to some of the organizational or structural barriers.

Two or three years ago a woman whom I worked with, who has risen in rank in D.C., pointed out, for instance, that the men will do all sorts of things to avoid calling her, "lieutenant." They will say very easily, "yes, lieutenant" to the male lieutenant but just in terms of acknowledging her rank, they are avoiding it. It is a subtle kind of a thing. I interviewed quite a number of women supervisors. There is the underlying residue of resistance. I think that they said even when they were saluted or addressed properly on a formal basis there was a kind of an undertone or an undercurrent of resistance. All new supervisors have to shape up their squad and yet they felt the kind of hazing or undermining they got was different from what many of the other male supervisors received. They felt that they often got less in the way of support, et cetera. So, yes, the world has changed formally but I think many problems still exist.

PARTICIPANT: I think sexual harassment is one issue; the rejection of authority is another.

PARTICIPANT: Obviously what you are describing is not like what you would see on a television show like "Cagney and Lacy."

PARTICIPANT: One of the questions that comes up with your presentation is, are you giving us what you call an image description, namely the sort of idealized version of the culture either from the point of view of the male officers that you interviewed and/or female officers who reflected upon it? On the other hand, is this enumerated and you cite these norms from frequencies that showed a behavior pattern? Is this somebody's ideal version? I do not mean ideal in the best sense.

DR. MARTIN: Well, I guess I would have to say that in a sense it is my ideal version but it is based on observation and it is based on discussion, both with men and with women. It is based on my own experience, admittedly a decade or more ago. It is filtered by my background to the extent that I was an outsider, married, and an educated person. I might have avoided some of this but I was subjected to other parts of it. I am glad I was not young, vulnerable and subject to the arbitrary authority of the supervisor who might well have fired me. I do not think the Tailhook scandal is all that far in the past. You can say it is about sexual harassment. You can also say it is about abuse of authority. It is about a series of presumptions about women and their place in the world and where they do and do not fit into the military.

Again, some of the observations may be based on a policing that was in the past. There was a sense of, "we are different; we are doing our thing; we are complementary. You know, we do not do that stuff on patrol. We are specialists." When they were integrated, they went into juvenile units and men were put in command of those units. They felt in a way put down and threatened. Many of the women who had avoided patrol back then were in essence told, "you go out on patrol. You have no option. You will not have any opportunity to make rank if you don't."

There were a whole other series of problems and there was clearly a generation gap. The older women had no desire to go out on patrol. They wore skirts and had guns in pocket books. The new women wanted to be treated as equals and wanted to go out on patrol. They were recruited for that. You get what you select for in a sense.

PARTICIPANT: What is bothering me is the earlier question that was raised from the standpoint of how you collected your data? I do not mean to reject the observations that you have made but it sounds very much like investigational reporting. It is so easy, therefore, to focus on the kinds of behaviors that are probably going to persist for an extended period of time. The rate of that behavior may have diminished considerably, or its spectrum, or the span over which it occurs. As far as the kinds of interactions, it seems that in many ways they are increasingly reflective of what appears to be the full spectrum of behaviors in the communities from which they come. That means, at least to me, that there are still a number of people who have extraordinarily strong biases and there is more pressure on them to adapt in some way.

Without having some idea of what the frequency of that behavior is toward males in the same situation, I do not think you can assume away the fact that a small male on patrol is really viewed as inadequate to the physical demands of the job as well. As you so clearly stated, the bulk of what law enforcement people do is order, control, and restoration and that depends much less on the gun and the badge than the physical presence of the people who are there.

I am not sure how we can sort through a lot of this although I am sure that if one were to go out and do a series of interviews at this point in time, that you could find these same behaviors. Unfortunately, it sounds like we do not have a context in which you could put it.

DR. MARTIN: I think it is clear that it is not at the same rate and intensity that it was. Policing does not have the same amount of research in comparison with the military. If you look at the research, almost all of the research on policing in the past decade has been focused on community policing. There is not the same amount of surveying of officers and departments. There is an awful lot we do not know. I cannot say "X"% of police have this attitude and "Y"% have that.

On the basis of case studies in departments as diverse as Phoenix, Birmingham, Chicago, D.C. and Detroit, I can say that I ran into what I would call "Cro-Magnon, caveman thinking" among some of the more senior men. I also found it, somewhat surprisingly, among occasional newer men who went into policing probably for the wrong reason.

I think one of the things, however, is that the culture and the ethos are still there. For the man who regards a woman as an equal and is willing to work with a female partner, he does it quietly. He does not go out on the barricades and speak out so there is almost a conspiracy of silence. To that extent the culture continues on, although individual attitudes are changed.

I think again, if you are asking my opinion, community policing has brought a bit of a change to the extent that it de-emphasizes the gunslinger, crime fighter image and emphasizes the problem-solving image. It is a much better fit with things stereotypically female and things that women are believed to do well that are not associated with size or stature. Yet, small men tend to have difficulty on the street. I mean, there is a bias in favor of larger officers.

Again, men learn to physically project themselves in certain ways that are different from the ways that females project themselves. It was interesting observing, again this is my own experience but also in talking to other women, that women had to learn literally to stand up to people in ways that I think boys in the schoolyard learn to do. There is just a physical difference in the ways boys and girls are socialized and physically relate. Women can do it and women do do it. Some do it well and some do not.

PARTICIPANT: Were there also ways in which women found new ways to project that same element and, therefore, operate on the streets in a convincing manner? That again strikes me as one of those extractable elements. How did men project authority and control? How did women project that? How are those learned?

DR. MARTIN: Certainly some women did learn how to project themselves. It may be that a number of police academies have incorporated in their curriculum something to this effect; that I do not know. They certainly did not do this a decade ago. Women go through the physical training. To the extent that they feel confident in their own ability to protect themselves, they are able to project a self-confidence on the street. I think in a way it is in the manner of trial and error.

PARTICIPANT: Do you have any data, for example, where one could hypothesize that if women are not as strong they might rely more on, say, gun power. Are women more likely to shoot people than say, male police officers? Are there any hard numbers anywhere to meet that hypothesis?

DR. MARTIN: There certainly is the belief out there in the culture that women will be trigger-happy. The very limited data on women shooting or using their weapons indicate that is probably not the case. I think that there are one or two articles on it. One of the problems is that women have tended to move off of patrol and into administrative positions. If they use their weapon less, you have to control for amount of time or exposure. I do not know that anybody has done that.

A number of the women (again, this is anecdotal) have used as a tactic men's fear on the street of women with a gun. They will very deliberately say, "you do anything, I am going to blow your head off. I will just go crazy." It is a calculated strategy that they use. It is a way of maintaining control and drawing on the fear of a woman with a gun. My observation and, as far as I know, the literature, do not indicate that women use their weapon more or that women are less likely to get in fights.

PARTICIPANT: Are they assaulted more often? I wonder how many of these hypothesizes are ever examined in terms of real data. It sounds like they do not collect that kind of information.

DR. MARTIN: There are 17,000 police departments out there, each with their own record-keeping systems. There is virtually no centralized data except the Uniform Crime Reports. Now, the Bureau of Justice Statistics collects administrative data. Use of force is one of those sticky things for which departments do not make data available. When I was trying to get some of this data in my case study, I found that there are unions whose bargaining contracts with the departments and the unions preclude in a number of instances giving personnel data. The departments, themselves, do not look at this. Departments very rarely do the kind of research that the military does and so we really have huge areas of ignorance.

PARTICIPANT: Do the departments make records of how many times a weapon was fired?

DR. MARTIN: Yes, they do count the bullets.

PARTICIPANT: It is not just counting the bullets. In every city that I know of, if you discharge your weapon, accidentally or not, the weapon has to be turned in. There are a myriad of reports that have to be filed. There is an internal investigative process and while they do not automatically aggregate and analyze the data, the proscriptions against giving out personnel information do not apply to asking for how many times internal affairs has had reports of discharges. I know from the standpoint of reliability issues, the court claims and from windows being broken on accidental discharge that municipal administrations have a very high level of interest in how often these things are going off. At least there is more data than just counting how many bullets are left at the end of the week.

You have to look at incidents among patrol people, among narcotics details, et cetera, so that at least there would be some way to compare people who are exposed in similar ways over time. I know of at least three jurisdictions where they have compared an emergency reaction team to the narcotics people. Narcotics people discharge their weapons at a rate three times greater than the emergency reaction teams. They are, in fact, in competition within the department to see who is going to go and do these kinds of missions.

I think that some of the points which you are making are helpful in that there may be some way that, through this, initiative studies could be crafted so that appropriate municipal jurisdictions or county jurisdictions can have useful information on women police issues. The studies could be looked at so that you would have some basis of comparison of different kinds of behaviors.

DR. MARTIN: The National Seat of Justice has funded a study of the use of deadly force by police. It has been done by the Police Foundation. I have not seen the report. As I said, the research funding for policing is very limited. Personnel issues of the sort that you are concerned with have not been funded nearly as generously as in the military.

PARTICIPANT: I do not know whether this is helpful at all, but the data recently coming out of a survey that was done in Haiti shows that women report being less stressed by concerns regarding the rules of engagement than their male counterparts from the same units. I do not know if that means they are more trigger-happy or less trigger-happy.

PARTICIPANT: Well, you know, their male counterparts report being more stressed.

PARTICIPANT: Also, it might have implications for mixed teams. In other words, you see a different pattern if there is a male whose partner is female. Looking at differences, you might speculate that the male partnered with a female might be more prone to do aggressive things. You know, an overt feeling that they need to keep watching out, to be vigilant about protecting themselves and their partner.

PARTICIPANT: I wonder if you could compare military communities which tend to be much more integrated in the sense that there are more female soldiers in the military in peacetime than in combat units.

PARTICIPANT: Some units are as high as 40%.

PARTICIPANT: The other characteristic of these type of police units is that a good number of the officers are married. The enlisted people in the military particularly tend to be married and/or have children. Is that true for the policemen in both male and female populations who are married?

DR. MARTIN: A much higher proportion of the men than the women are married. Again, when people come into the military you gather these statistics and you update them with divorces and remarriages, et cetera. In policing, the departments very often do not have or provide that information.

PARTICIPANT: Is it in the personnel system?

DR. MARTIN: It should be. Again, in my experience sometimes it was in the personnel system, sometimes it wasn't. Sometimes it was updated, sometimes it wasn't. It was pretty clear from the samples that I was dealing with that there was a higher proportion of men than of women that were married. There was a fairly sizable cadre of women who were single parents, who had children.

PARTICIPANT: Was that age determined? Age and rank?

DR. MARTIN: It was both age and ethnicity. Police like to say, or used to like to say, that they had a higher divorce rate because of the stresses of policing, et cetera. Again, I do not know that there is literature that would bear that out.

PARTICIPANT: What if these are married men, for the most part, with kids? Do they still engage in the same sort of locker room behavior as the young men? I am just trying to understand that dynamic there.

DR. MARTIN: All I can say is that there were plenty of male officers who had a wife and a mistress, so to speak. I do not think the fact that they were married deterred all of those from interest in outside extracurricular activities.

PARTICIPANT: I am trying to focus back on what kind of cohesive relationships there were. In other words, if you have a family and you are a police officer, do you not talk to your co-workers about your family? Do you exclude them totally? Do you worry about your family when you are out on patrol? Do things that happen to your kids bother you in your duties or is this just a totally separate male world where a Sylvester Stallone type reigns?

DR. MARTIN: I think, of course, officers are concerned about their families. I assume in the squad car that they talk about all variety of things with their partners. In terms of the kind of aggressive action that men take, to go back to the comment that was made, I think that the very important thing is the trust between two people who work together. With any new partner, whether it is male or female, the person will behave in a way that is different from somebody with whom they have learned to interact and anticipate reactions. I assume male/male teams work out certain arrangements and male/female teams work out their own arrangements. They may be similar and they may be different in terms of divisions of labor.

PARTICIPANT: One of the things we learned from the military, is that in mixed gender organizations some of the things that symbolically bond men and women are talking about families and children. Men do a lot of talking about families and children with their female co-workers.

DR. MARTIN: I really cannot respond to that. I was almost always in a mixed gender unit working with men when I was on patrol. I did not work with anyone for a very long time so there was always the initial interaction to deal with rather than knowing somebody well enough to unburden. In terms of information I gathered, I cannot say I got very much in the way of what partners talk about. The men that are comfortable with women probably do spend time talking about things that they both are interested in like families and relationships. I certainly do not have any basis for speculating further, but what you say seems likely.

The police view themselves almost as a tribe or as a large family. I do not know that there is cohesion in the police squad that is analogous to the military squad. Some departments have single-person cars and there is no interaction. In other instances, like in Detroit, they will have a three-person team and so six of the days of the week two out of the three are there and there is a third one who floats on the seventh day. There are all sorts of different arrangements and there are all sorts of moving around and filling in. Usually people pick each other. Sometimes they do not and then you get all sorts of unhappy relationships.

PARTICIPANT: When you say they pick each other is that a formalized process or just informally?

DR. MARTIN: Both. People will make known to the assigning sergeant that they want to work with somebody or, often, they cannot stand working with somebody. They are also formally assigned, with officers assigned to cars. When one officer transfers to another unit, for instance, then there is an opening. People can apply for the opening but they know who the other person in the car is going to be.

PARTICIPANT: When you say squad, do you mean a car?

DR. MARTIN: No.

PARTICIPANT: You are talking how many people in a squad?

DR. MARTIN: There is a group of six or eight people who are assigned under a sergeant or a supervisor. That is what the squad is. Your sergeant may be responsible for another sector. There is a certain amount of flexibility. The smallest unit is the squad and then there is the shift and there may be two or three squads on the shift. People who are on different shifts see each other in passing and turning over the keys, et cetera.

PARTICIPANT: Frequently, good sergeants who are in charge of a squadron, if they clearly have somebody that nobody else can work with, will find ways to make up paperwork details for them and other things like that. They will assign undercover work or try to find some niche where they can be on their own. The perennial screw-ups generally wind up in communication. They get stuck in there early on and not infrequently cannot get out. You talk about an unwise administrative process.

PARTICIPANT: Let me ask you, has there been enough time for the development of a women's culture in policing? You talked about the men's culture. The picture I had earlier when we were talking was one of the women trying to get into, maybe not that culture but a culture of some kind. Has there been enough development of women in that work that they are developing norms that are different? Is it a men's culture or a police culture?

DR. MARTIN: I think that is a very good question and I do not have a definitive answer. My sense is that there is not a unified women's culture.

PARTICIPANT: Was there a unified men's culture?

DR. MARTIN: I had expected to find that one of the ways that women cope with some of the problems that they faced was to organize and unify. In fact, I think that that has not been the case. There are not very many or very viable women's organizations within police departments. Hispanic women join Hispanic organizations. Black women have tended to join black police organizations. In D.C., the department tried to foster a general women's group but it fell apart.

What I found, and again this may be dated, was that there were two ideal types of responses on the part of women that cut across age and racial lines. There was one group of women that I call *police* women who put the emphasis on conforming with the norms of policing as they were. They tried to be tougher, make more arrests, and be more productive than the men while conforming to the macho rules of policing. They wanted to stay on patrol. The other group, which I call *police women* felt they did not like patrol. They did not like that kind of work. They tended to go inside, to focus on community kind of stuff. They disavowed these sort of "foul-mouthed butchy kind of women," at least at the stereotype level. Those women said that the *police women* were inadequate as officers, were cowardly, and were unable to conform.

These are ideal types that I observed. Most women had elements of each. Yet, I think that the differences in the ways in which women dealt with some of the dilemmas of being both officers and ladies, so to speak, was to go in these opposite directions. When they were pushed together by the police department into "Police Women in Action" which was controlled by the department, that did not work either.

I think that one needs to acknowledge the fact that there were racial splits, too. That also undermined any unity. One of the women said to me, "you know, I came in as an individual and I succeeded as an individual and I did not want to be like those other women." Each seemed almost to actually want to find her own way.

I think that women were able to react emotionally more easily. The stuff that they dealt with was hard to take. Again, I think that you have two overlapping kinds of curves in terms of responses. By and large, the police have to harden themselves to some of the gruesome aspects of life that they are exposed to daily. They develop a gallows kind of humor. I think women can get into a lot of that. I think that a number of the women observed that they were able to react emotionally. The men said, "oh, don't get yourself too emotionally involved." However, I think that it helped women police officers to permit themselves to react in an emotional way.

PARTICIPANT: I would raise one other point which has been bugging me. I have been wondering about community police involvement. Is there, in any sense, a slotting of women into this area even against their will if they are more patrol-oriented? Is it based on gender and on promotion or is this just something people come to because they prefer that kind of work?

DR. MARTIN: I would have to say that like everything else in policing, it varies by department. I know that with sex squads or domestic violence squads, all of a sudden about 15 years ago, they discovered women could contribute and should be involved in these investigations. That opened up avenues for women and in many cases women sought to go into it. I also spoke to women who had been assigned there and really resented the assumption that because they were women they would be interested in or good with rape victims. I think that you have some of each.

PARTICIPANT: What we hear about the D.C. police (I do not know if it is true) is that most of them want to sit and do paperwork, including the males. They do not want to go out on patrol because it is scary out there. Very few police officers actually patrol the streets in D.C. and look at the result. That is what we suburbanites get.

DR. MARTIN: Well, both are true, you know, and they are not necessarily antithetical. I think it is dangerous and scary out there and the new generation of D.C. cops are not well trained.

PARTICIPANT: If there is enough activity on the streets that patrol people run into, they have to do the paperwork to back it up. There is an inevitable linkage. If things are quiet enough then people do not mind being out. At the same time there is not that much work which would require them to be in filling out papers. It just keeps going round and round.

PARTICIPANT: We want to thank you for coming and talking to us and broadening our perspective on policework and policewomen. Thank you also for tolerating our questions which I know came from many directions which were not your areas of expertise. It helps us to be able to spell them out loud and hear everybody's viewpoint on what questions we should be asking.

Eating Disorders

James E. Mitchell, M.D.
Elizabeth K. Holmes, Ph.D. (CDR, USN)

DR. GABBAY: Should we get started? It is my pleasure today to welcome two speakers who will speak to us about eating-related behaviors and eating disorders. First, Professor Jim Mitchell. Dr. Mitchell is Professor of Psychiatry at the University of Minnesota, and he has worked extensively in the area of eating disorders from both a clinical and research perspective. He will talk to us today about eating disorders in general and current thinking in that area.

Commander Holmes, who is on the faculty at the Naval Academy in Annapolis is here as well. I believe she will speak to us more specifically about the issues of eating-related behaviors and eating disorders in the military population. She has done studies on the midshipmen in Annapolis. I look forward to this seminar and am hoping that even once we get into the substantive issues we can go beyond that, as well, and discuss some of the challenging issues relating to the presentation of this problem, if it turns out to be a problem, in the military to those in decision making positions. So, welcome.

We will introduce ourselves.

DR. GLOWA: My name is John Glowa. I am a new Professor in Psychiatry and also am at NIH.

DR. GABBAY: Is am Francie Gabbay. I am Research Assistant Professor of Psychiatry here at USUHS.

DR. URSANO: Bob Ursano, the Chair here.

DR. ROSENBERG: Florence Rosenberg. I am a sociologist.

DR. FOLKS: I am Bob Foulks. I am a clinical psychologist in the family practice department.

DR. A. ARMSTRONG: I am Alicia Armstrong, obstetrics and gynecology.

DR. LEVINSON: I am Kathy Levinson, a clinical social worker in psychiatry.

DR. MITCHELL: Jim Mitchell.

DR. HOLMES: Betsy Holmes.

DR. D. ARMSTRONG: Dave Armstrong, research scientist at Bethesda Naval Hospital. I worked with Commander Holmes and with Commander Drake on semi-related studies.

DR. MITCHELL: There have been some interesting changes in the diagnostic system with DSM-IV and I will mention those as I go along. This is the current scheme of the DSM-IV and the circles are meant to illustrate relative problems with these disorders. Anorexia is the least common of these conditions but as we all know, the most dangerous in terms of morbidity and mortality. Lifetime prevalence rates really are not known at this time. All we have is cross-sectional data from the populations at risk, but probably in the age group of 15 to 30, 35, the prevalence rates of anorexia are about 0.5 % or one in 200. Those are fairly consistent across western societies where we see these disorders. I will come back to the cultural things a little bit later.

DR. URSANO: You said 0.5 %?

DR. MITCHELL: Yes, about 0.5 % in adolescent and young adult women. The best figures for bulimia are about 2 %. Some studies show 1, 1.5, some as high as 3 %, but if it is rigorously defined, and if you target patients that binge eat and engage in compensatory behaviors like self-induced vomiting, it covers right around two %.

In DSM-IV there is this new disorder called Binge Eating Disorder (BED) that actually didn't make it in as an official diagnosis. It is listed in the appendix as a disorder study and it is also listed in the example of eating disorders not otherwise specified. There were actually 10 new disorders that were considered for inclusion in DSM-IV. There was the most interest in including BED, but political reasons rather than scientific reasons kept it from being included. I don't know how many of you are familiar with the DSM-IV process but there was a very strong movement not to add new diagnoses because of all the controversy that had surrounded the mushrooming of diagnostic categories in DSM-III and DSM-III-R, mainly under the auspices of Bob Spitzer, who was the main architect. So we decided to hold the line, if you will, on new diagnoses, and because of that BED can't get in, although clearly there is something there. It is a very interesting disorder that we will talk about a little bit today.

Also, we have these unclassified things hanging around the fringe. This circle can be bigger or smaller, depending on how we define it, but not uncommonly you see patients who have sub-syndromal eating disorders in clinics and certainly they emerge in population surveys. For example, they will have all the symptoms of anorexia but they won't quite meet the right criteria, or they will have all the symptoms of bulimia but they won't meet frequency criteria or they will have binge eaten and purged in the past but they have quit binge eating and they are continuing to throw up after they eat. That sort of thing is relatively common in population surveys.

These are the current criteria for anorexia. If anybody would like copies of the data on any of these slides, let me know and I will send them to you but these are the DSM-IV diagnoses. You have got to get your body weight down to 85 % of that expected. The expected rates are given in plus or minus 10 % in most of the tables that are used, so in reality, the average patient with anorexia is at 75 % of the median weight, median frame for somebody their age and height.

The tests, here, are of gaining weight or becoming fat even though underweight. The thing that is the most interesting about this criteria is that generally the thinner anorexics become, the more they are concerned that they will lose control and start gaining weight.

Third is body disturbance. This phrase about the denial of the seriousness of the current low body weight was added in DSM-IV for good reason. A lot of people now who present with anorexia know that they supposedly have a distorted body image and they will say that they don't deal with the fat even if they actually do after you get them into therapy and start talking with them about it. They tend to deny the fact that their low body weight is a problem despite the fact that everybody else is worried about it.

And then amenorrhea which is just an easily ascertainable marker, physiological dysfunction. Rather reliably, patients who get below 85 % ideal body weight will develop amenorrhea.

Now, the other major change in DSM-IV was the subtyping, the restricting and bingeing and purging types. This reflects a growing awareness over the last decade that about half of anorectic patients starve themselves. These tend to be the earlier onset cases. They also tend to be the cases that have the least comorbid psychopathology. In other words, they are the girls and young women who don't have associated depression and anxiety problems. They also have the best prognosis. They are also the easiest to treat. About 45 to 50 % in most series now are binge eating and purging and there is some data, although it is not overwhelmingly convincing that this subtype is increasing and we are seeing less of the purely restrictor anorectics and more of the ones that binge eat and purge.

The binges here usually are fairly innocuous by bulimia nervosa standards. They say they are binge eating. When you talk to them many times, they are not. Their eating is really small and modest but they reliably purge. They will self-induce vomiting or use laxatives or something like that. This is a marker for bad prognosis. These are the patients that account for most of the fatalities. They are the ones that are most likely to relapse after their next treatment and the presence of these symptoms, as we will see a little bit later at one year follow-up is an indicator and predictor of 10 year morbidity and mortality. So this differentiation is extremely important clinically in working with these patients.

Just a couple of other points. The male-female ratio is about one to twenty. Fairly uncommon in males. The incidence studies which indicate an increasing incidence and prevalence of eating disorders suggest that they seem to be increasing in parallel, for example. When I say more males relative to females, the prevalence stays about the same. In some series it is higher than 20 to 1, in some it is 10 to 1, but generally 5 to 8 % are males. If you look at the males, they are really remarkably similar to the females in terms of age of onset and course of illness. There is not a lot of difference between them, and the situation in males may be of particular interest to you. There is quite a bit of literature on them right now. Prevalence, as we said, is about 25 %. The stressful events thing is kind of debatable. I wouldn't put a lot of stake in that.

This is one of the more interesting findings, I think. You read a lot of things in the literature suggesting that people who develop eating disorders have certain particular personality traits. Most of that is really unsupported with the exception of one finding and that is the restrictor anorectics, the ones who just starve themselves, have a very high rate of having a lot of obsessive-compulsive features pre-morbidly. They tend to be very rigid, perfectionistic girls and those sorts of symptoms tend to be exaggerated when they lose weight. They become much, much more obsessional. It is interesting. We do this with medical students frequently in our inpatient service. If we walk around the ward, you can pick out the rooms of the girls and women who have restrictor anorexia because they are so neat and clean and everything is arranged very well as opposed to bulimic anorectics where everything is kind of a mess and thrown in a corner.

The family dynamics is also an interesting thing and again, a number of people have written extensively on this. In the 1970s, Minuchin, in particular, popularized the idea that there were certain family systems or dynamics that predisposed the eating disorders and frankly none of that has held up in empirical research. What we know is that there tends to be an excess of certain forms of psychopathology in first degree relatives, particularly affective disorders, but there are not any family systems that seem to pre-ordain eating disorders. The one thing you can conclude is if you have got a kid with anorexia, you have a family that is having problems but a lot of times it is because of the anorexia rather than the cause of it.

These are sort of the cardinal symptoms, the starvation, fasting. This is usually progressive, a lot of times anorectics will start by trying to get their fat content very low. They will become vegetarians and then progressively they exclude more and more foods and many times by the time they come to treatment, they are eating very small amounts of just a few food substances, generally fruits, vegetables, things like that.

Hyperactivity characterizes a subgroup. In some series, 30 to 40 %. The hyperactivity is really interesting in that many of them are literally exhausted because of the fact that they are starved, yet they will push themselves to be hyperactive and to exercise. Many times the exercise patterns don't really correlate with cardiovascular fitness. For example, if they are concerned about their stomach area, they will do 1,000 or 2,000 sit-ups a day. A lot of the exercise is directed toward modifying specific body parts that are of concern. There is an interesting animal homologue to this as well. It has been demonstrated in a variety of species, by mammals in particular and some higher mammals, including some species of monkeys. If you food deprive animals, many species become hyperactive, and this is felt to have final genetic significance in that if an animal is in a semi-starvation state, it needs to expend whatever energy it has left in food-seeking behavior. Some people speculate that the hyperactivity might actually be a side effect of the starvation.

The other thing that is very interesting about anorectics is when they do eat, they take an inordinate amount of time to eat and many of them will develop elaborate rituals around eating. If you are ever on a ward where there are anorectic patients, it is interesting to eat with them because they do a variety of things. There is not a set ritual, they seem to each develop their own. For example, they may salt or pepper their food excessively as a way of ruining the taste and they eat certain food in sequence. It takes them quite a bit of time.

Now, switching to bulimia, this is the DSM-IV criteria set of bulimia. You have got to have binge eating episodes and this is a real problem. There is not a lot of uniformity of opinion as to what actually constitutes binge eating. If you ask people, an awful lot of people say, yes, I binge eat. If you pin them down and look at the amount they are eating and at the sense of lack of control, you end up eliminating most people. You end up identifying people who clinically supposedly have binge eating. Fairly typically the amount of food that is ingested in bulimia nervosa is more than 1,500 kilocalories in one setting. It is unusual for most humans to eat that much in one period of time like an hour or two hours so you can have that as a loose cut-off. Actually, eating binges in various studies generally average anywhere from 3,000 to 7,000 kilocalories which is a huge amount of food but there is sort of a gray zone there where it is hard to tell.

They have to engage in some sort of compensatory behavior. This was clarified in DSM-IV and in particular now, purging versus non-purging bulimia has been added. You have to have self-induced vomiting, laxatives, diuretics, things like this or you have to engage in other, non-purging compensatory behaviors. Frankly, nobody knows much about the non-purging group. There was a lot of controversy about this and a number of people, and I was one of them, want to throw out non-purging bulimia, mainly because we don't know much about it. In clinical trials, almost everybody focuses on the purging group but I suppose it is better because in the clinical sample almost always you are dealing with patients who binge eat and vomit or use laxatives.

You have to do these things at least twice a week for three months. That is a very conservative criteria. It is not based on any data. It was made up in DSM-III but it is fairly conservative. The average patient coming for treatment with bulimia is binge eating about 10 to 12 times a day and vomiting a slightly higher number.

You have got to worry a lot about weight and shape. Indeed, if you look at data on scales that tap this construct, bulimic patients tend to score very high. A lot of women score very high, however, and it is not very clear that all of them are that much different from so-called normals. And lastly, if you meet criteria for anorexia, you get that diagnosis.

Now, one of the things that some people are not familiar with when they think about anorexia is the cornucopia of behaviors that these people get into. Most people are familiar with binge eating, 24-hour fasting occasionally, self-induced vomiting, and laxative abuse which are very common. If we look at changing patterns in either sort of patient, laxative use is the thing that is increasing. This is becoming an increasingly popular behavior. I hate to use that term. For those of you who are not familiar with this, this involves ingesting large amounts of stimulant type laxatives to induce diarrhea and what happens is you lose large amounts of fluid and you feel thinner. If you get on the scales, you have lost five pounds or so, so it is a very reinforcing behavior obviously.

Diet pills, most of this is over the counter, Dexatrim sort of things, is not a major problem. Most of it is infrequent and sporadic. There is a small group of patients, however, who take large numbers of these pills. They may take five or ten Dexatrim twice a day, for example, and those are the patients we worry about mainly because of the effects on blood pressure.

Rumination is something nobody even knew about until about seven or eight years ago when we started asking about it. About a third of bulimic patients will periodically ruminate food where they vomit food into their mouth, chew it, and re-swallow it. This is a particularly damaging behavior in terms of the dental enamel. I will show you a slide on that a little later. Also, about a third as an alternative will periodically chew and spit out food rather than swallowing, let's say, a quart of ice cream. During the binge, they will put it in their mouth, they will chew it and they will spit it out as an alternative.

About a third experiment with diuretics. Most of this, again, like the diet pills, is over-the-counter diuretic usage, things like Aquaban. They don't work very well, most of them rely on caffeine as a mild diuretic agency but there is a small group, probably 5 % who get into prescription diuretic abuse and that can be quite dangerous. There are some interesting studies, if you look at diuretic use among women, particularly women who don't have some clear medical indication for it. A number of them seem to be using diuretics as a weight control type thing. So this is kind of an unrecognized problem I think in medicine.

This is a problem of the upper Midwest; Minnesota and Wisconsin are the two big sauna selling areas in the United States because there are many Scandinavian people up there. We actually wrote a paper on this. I will be remembered in future generations for the sauna abuse article I wrote. I will send it to anybody if they are interested. We have got a subgroup of patients who will spend protracted periods of time in saunas as a way of losing weight and again, you can lose a lot of weight if you sit in a sauna for eight hours. It is quite damaging in terms of the electrolyte and fluid problems. Also, small group of patients give themselves enemas thinking this is a way to lose weight.

This is a slide I stuck in to allow you to elaborate on several points. I think one of the things that is most interesting about eating disorders is the fact that in studying them, you have to cover a very wide area from broad-based cultural studies all the way down to neurochemical sorts of things. All these things are probably involved to some extent. For example, we know that these are highly culturally bound illnesses. Studies in third world countries show that anorexia and bulimia are extremely rare and if you see them, they are almost always in the upper socioeconomic groups who are adopting traditional western values. For example, in India you will find occasional anorectics and bulimics but it is always in the upper strata of people who have adopted western dress and western cultural mores.

So, North America, Western Europe, Australia, New Zealand, and Japan have a lot of eating disorders. Like I said, one of the first reports of bulimia was out of Japan. Studies done in China, United Arab Emirates, several other countries show very, very low rates. An interesting study was done in Greece which showed that Greek girls and women had very low rates, but Greek people who have emigrated for work to Germany have significantly higher rates. They are going to a culture where they develop eating disorders.

The cultural variables that seem to correlate with this that everyone focuses on are one, the wide availability of food and, two, most importantly, a very high view of slimness as a model of attractiveness for women.

Finally, behavior. We are not going to be talking about treatment much today so I am going to skip that. The developmental issue is extremely important. These are disorders that start usually right after or within five to ten years after puberty at a time when girls' bodies are changing. They are laying down more body fat, their body is changing dramatically, and in a way it is difficult for many girls in that age. For some reason that seems to be a marker for the development of eating disorders. There is also some evidence that girls who enter puberty earlier and have these changes before most of their peers are at higher risk for eating disorders so there is quite a bit of evidence that developmental factors are important.

Familial studies, as I said, suggest that eating disorders cluster in families with other forms of psychopathology, particularly depression. Also there is some evidence that bulimia is more likely to occur in families where there is also an excess of alcohol abuse.

The neurochemical. We could talk about this at some length but there is a lot of interest in the biology of appetites. The neuroscience parts of our understanding of when and why people eat and when and why people don't eat has grown dramatically in the last 15 years. This has been a very fruitful area. We understand a lot now about events, neurochemically that are involved in both initiation and termination of feeding. There is quite a bit of evidence that things happen in eating disorder patients that tend to maintain the behaviors. For example, one of the substances that is involved in signaling satiety or meal termination in a variety of species including humans is a peptide, cholecystokinin or CCK. When we eat certain things, particularly amino acids and eating chain fatty acids, those substances get into our small bowel and CCK is released. It binds to vagal afferents in the gut and via a synapse in the nucleus of the tractus solitarius, signals the hypothalamus that we have had something to eat and we can turn off our feeding and we can induce satiety feelings in animals in this way by giving them CCK.

It has been shown in bulimics that they have markedly impaired CCK response to a test meal. It is probably something that happens because of mechanical changes in their gut because of binge eating but it may be one of the reasons why many of them report that they never feel full, even when they have eaten massive amounts of food. So CCK is one example of several chemical events that have now been mapped that seem to perpetuate eating disorders once they are in place.

The relationship with depression is very important. Lifetime comorbidity is not uncommonly 78 %. Also, there is this interesting phenomenon with early trauma, particularly sexual and physical abuse and a very big topic, very controversial topic. The studies which suggest that there is an exaggerated risk compared to normals for sexual and physical abuse in women who develop eating disorders but not higher than other forms of psychopathology. We know now that history of sexual abuse is a risk factor, for example, for lots of psychiatric illnesses, not just eating disorders. Unfortunately, some people have gone so far as to assume that patients with eating disorders have always been sexually abused, even if they don't remember it. There has been an interesting case in Minnesota, I don't know if it made the press here, a physician whose patients were awarded damages of \$4.2 million. This was a therapist who was telling patients they had all been sexually abused and they didn't remember it. So this is growing nationally and I am sure some of you are aware of the literature with the same problem.

Okay, I wanted to say just a little bit about long term outcome with anorexia. Again, I think most of us know this but we may not know how severe it is. The long term morbidity and mortality from anorexia is higher than any other psychiatric disorder. You are more likely to die of anorexia nervosa than you are of major depressive disorder, bipolar disorder, alcoholism, essentially anything.

There are four studies now. I have got to update this slide, there is a fourth one that is called the Mannheim Study that came out of Germany. The longest one now is a study by Sven Tandar in Sweden, Gerald Russell's study from the Maudsley in England, one that was done in Minnesota and patients that were then recruited in Iowa (Kathy Helms at Cornell now), and then the Mannheim Study which is out 10 years. What they all show is that many patients with anorexia nervosa remain symptomatic in various ways for long periods of time. Some patients don't recover until they have been symptomatic for five, six, seven, ten years. You can't really say who is going to recover many times for years. The patients struggle with this thing, they lose weight, they gain weight, they become depressed. It is a very difficult illness for patients to overcome.

Also, if we look at follow-up. At 10 years, generally about 7 to 10 % will be dead. At 20 years, the rate is approaching 20 % in some of the studies. The figure here is actually from a 20-year follow-up. The Mannheim data look very similar so about one in ten are going to be dead by their mid-30s or early 40s which is a very high rate. Also, as we said, the bulimic symptoms predict poor outcome. If at one year follow-up patients are still low weight, if they are binge eating, vomiting or using laxatives - those are all suggestions that they are going to have a bad long-term outcome.

Now, as we all know, one of the problems with the DSM system, at least I think it is a problem, is that it encourages us to make multiple diagnoses and there has been a lot of interest in comorbidity. Eating disorders are a great example. You can find high rates of all kinds of other disorders in eating disordered patients. The ones that have been studied most extensively are affective disorders and, as I said earlier, very high rates of anxiety disorders. For example, if we do a 10 year follow-up with anorexia nervosa, we have a very high risk of social phobia and other anxiety disorders.

Substance use and abuse. This one is an area of interest of ours. Basically, if you screen bulimics in their mid-20s, you will find that one in four to one in five has had or currently has an active substance abuse problem and those are rates about four or five times the rate in the general population. So very high rates of substance abuse, usually alcohol, occur. Also they tend to score very high in the measures of personality disorders, particularly, the restrictor anorectics in cluster A and C and the bulimic anorectics in cluster B which is borderline and a social acting out. In bulimia nervosa, it is cluster B as well.

Let me skip ahead now to some BED slides if I could. That is an area that I think you would be interested in. In DSM-IV, a number of eating disorders not otherwise specified are stipulated. The one that I wanted to talk a little about is this last one, binge eating disorder, recurrent episodes of binge eating, symptoms of inappropriate compensatory behaviors, characteristics of that. Now, if you look back to the obesity literature (and most of these people are obese or overweight), there are two things that are of interest here. One is that there have been reports dating back to the 1950s that there is a subgroup of obese people who binge eat. There was a report by a guy named Hamburger (unfortunately) on hyperphagia in obese patients, eating that is compulsive and uncontrollable.

And Albert Stunkard who has written so many brilliant things, wrote an article where he described binge eating as a subgroup of obesity, had an orgiastic quality, enormous amounts of food in a short period of time, and then Cornhaber described the syndrome as stuffing syndrome where he said this seemed to be related to emotional problems and depression. So people have known that there was binge eating in the obese but nobody was interested in it until fairly recently and, to his credit I think, it was Bob Spitzer who sort of stimulated interest in it and did the first field trials trying to define diagnostic criteria.

The other thing that has been present in the obesity literature for much longer, for 50, 60 years, has been the notion that in some studies obese individuals have high levels of psychopathology and in other studies they don't. Nobody has been able to explain that. Are people with obesity more psychopathological or are they not? Certainly we know that they run into all kinds of social problems and that may cause them to develop psychological problems but are they more inherently psychopathological? It has been an open question, and one that has been heavily debated. This thing about binge eating is extremely important because it appears to explain the presence of comorbid psychopathology. If you look at obese individuals and separate out the binge eaters versus the non-binge eaters, the psychopathology clusters in the binge eaters - there is a very strong association which is interesting. That is one of the reasons why BED is in the appendix.

Now, this is a study we did a few years ago reviewing this literature. If you look at the presence or absence of binge eating versus non-binge eating in the obese, what does it correlate with? These are the things it correlates with either negatively or positively.

First of all, it correlates with the female sex. In other words, binge eating in the obese is more common in women in the available studies (but I will come back to that in a moment.)

Secondly, they tend to be younger, it correlates negatively with age and what this means is that people who binge eat tend to become more overweight at an earlier age. Binge eaters start earlier than other obese folks in terms of gaining weight. They are the ones that many times are quite heavy by the age of late adolescence or early adulthood. There is a lot of obesity in the general population that doesn't start until the 30s.

It correlates with very high BMI and in particular if we cross-sectionally look at the rate of binge eating versus biomass index (or weight basically), what we find is that the heavier people are, the more likely they are to be binge eaters so binge eating accounts for a very small percentage of people who are modestly overweight. However, if we get to the people who are very pathologically obese, and by doing that we are identifying a group of people who account for a lot of the adverse medical outcomes in obesity, you find very high rates of binge eating. For example, we screen people who are undergoing gastric bypass surgery. The rate of binge eating is extremely high.

It correlates with affective disorders. Many of these people are depressed with scores on depression inventories with having had psychotherapy, personality problems, general psychopathology, you can read this for yourself. Basically, the binge eaters are the people who score high on various measures of psychopathology. They are dieting earlier, and have markedly distorted body image and many times also they are the people who score high on measures of disinhibition. And in particular there has been a lot of interest recently in using Tellegen's instrument which measures impulsivity. What we find is that the obese binge eaters tend to be generally impulsive and if you look for other impulse control problems, compulsive gambling, obsessive shopping, things like that, the binge eaters are the ones that are more likely to develop those problems as well.

These are the full criteria. Binge eating is defined just like it is in BED. Despite that, it is probably not the same thing. When you work with these people, you find out that their binges are really qualitatively different. We do a lot of group treatment studies and when you talk with bulimics or you have bulimics in a group talk about their binges, they attach a very negative affect to them. They don't describe the food, they are not really enjoyable. It is almost a ritualistic behavior that they engage in.

The BED folks, on the other hand, talk very affectionately about their binges, about the food that they ate, they seem to enjoy it. The hypnotics are very different for binge eating in these obese folks.

Then there are these, what are called, B criteria. You eat much more rapidly until you are uncomfortably full, large amounts when not physically hungry, you eat alone because you are embarrassed and feel disgusted with yourself afterwards. These don't really add anything to the diagnostic specificity if you meet the other criteria.

You have got to be markedly distressed and this is, I think, worth noting, as those of us who are psychiatrists know, the DSM system under Bob Spitzer has had this distress sort of creep into a variety of diagnostic sets. Binge eating disorder is one of them. There is a problem with that, I think. What this means is you can do all these things but if you say it doesn't bother you, then you don't get the diagnosis. Now, for certain psychiatric diagnoses we don't do that. Schizophrenics say they are not bothered by the fact that they are schizophrenic. We still diagnose them as having schizophrenia or bipolar disorders. But then we have this group of disorders (and BED is a good example of them) where people say, "nah, it doesn't bother me", it is not a disorder. It is a model that was first introduced around the issue of homosexuality and the revision of DSM-II and now Spitzer has, I think, for good or bad, included it in a lot of the diagnostic sets so this bothers me and if you ignore this criteria, the rate of binge eating in obese goes up to threefold. So it is important.

You have got to do it at least two days a week for six months and you can't have another diagnosis. This is different than BN which focuses on episodes rather than days because of the fact that these people don't have the purging compensatory behaviors. They tend not to remember as well on the episodes they actually have.

There have been two, well, actually three now, unpublished population based surveys now looking at BED. And the N here, across these studies, was somewhere around 2,000 although the third unpublished was even larger than that but we look at our weight control sample. A lot of people say that they binge eat and about a third meet the full criteria for BED. The community in general, as we said, it is about 6 % or three times higher than people who say they binge eat than the BED criteria. The distress criteria, which is really the thing that separates these, is about 2 %. Then if you look at Overeaters Anonymous (OA) which, for some reason, seems to attract a lot of binge eaters.

Now, what does the diagnosis do if we sort of stand back and look at it is that this literally recruits about five million Americans into the ranks of the mentally ill who weren't there before. I don't know how most of them feel about it, but I know how third party payers feel about it. They are not particularly happy about all this new business and I think that is another reason why it didn't fully make it into the DSM-IV because of clinical implications of it.

This is looking at the severity of BMI and the prevalence of binge eating. As you see, it does that very dramatically. This is the comorbid diagnosis of BED folks. This is a study by Susan Yanovski who is here at NIH. There are a couple of other ones that are very similar now but you find high rates of personality disorders and high rates of axis one disorders. In particular you find high rates of major depression, lifetime major depression.

So I think I have taken up a lot of time, probably a little too much. I will turn the microphone over to Commander Holmes.

DR. HOLMES: Given that as a way of introducing this particular topic and dealing with eating disorders on the college campus, I just recently went to a program up at Penn State where Dartmouth, Princeton, Oklahoma, Illinois, Bucknell, and many other colleges were represented and they were talking about two very common behaviors that are new and not in DSM-IV.

One is called exercise bulimia and the other is called beer bulimia. On college campuses the favorite activity is to exercise to excess in order to control one's weight and the other is to drink beer to excess and purge in order to control one's weight.

Of course, we don't have the latter at the Naval Academy because we have no alcohol policies. This past year at the Naval Academy the three biggest visible issues to the media coming out of the Naval Academy has been the pregnancy policy, the alcohol policy, and the eating disorders policy, so our Admiral and our Commandant have been focused on these particular quality of life issues related to midshipmen.

As of last Friday, when we reviewed the literature on eating disorders in the military using MEDLINE, we only found a couple of studies. The two studies are out of Israel with women soldiers and looking at an eating attitudes test (I have those abstracts with me if anybody wants them.) We are really not able to speak with any eloquence about research on eating disorders in the military so I need to speak to you about the issue of eating disorders at the Naval Academy and let you know that we hope this will be some pilot work on what we hope to do with eating disorders.

To give you some background, Dr. David Armstrong is here with me today. He is an Exercise Physiologist, who has been doing the bone density study at the Naval Academy with Dr. Drake from Bethesda. In that work he was quite interested in what is now called the "female athlete triad." He had the information on two of those three legs of the female athlete triad. He knew what amenorrhea was, and its prevalence in some regard and he was looking at the bone density loss. But he didn't have the third leg that had to do with eating disorders.

At the same time, at the Naval Academy, there had been a three year ongoing task force of people interested in looking at eating disorders at the Naval Academy because of the issue of commissionability of graduates and the military policy about eating disorders. While they were wanting to provide treatment for people at the Academy, there was a political problem about providing treatment with that issue of commissionability.

When two female midshipmen decided this past December to leave the Naval Academy because they needed treatment for their eating disorders and they had exit interviews with the Commandant, it became aware to him, as a line officer who had been in the military for a number of years, that there was an eating disorder problem that he knew nothing about. He asked that we have a working group and Dr. Armstrong went to the women's midshipmen study group and the eating disorders working group and suggested that we do some research.

People at the Naval Academy at that point in time were quite concerned about the public knowledge about eating disorders at the Naval Academy and what stigma that might bring to us. But in spite of that concern, there was a decision to move forward and to do some first time ever research on college campus using the entire student body. That hadn't ever been done before.

So some background on an eating disorders program. We decided to take a look at the issue of eating disorders from a research perspective, from an education perspective and from a treatment perspective with the entire Naval Academy being involved in it at some level through these yard-wide subcommittees.

We called West Point, we called and talked to people at Air Force and at Coast Guard and there was a multitude of responses, one of which was, "we don't have a problem here" and the other of which was, "the way that we treat it is we have signs up in the ladies' bathroom saying if you need any help, go and see this particular person." So, they were interested in whether or not we would go forward and do any research. To tell you about the research and then to tell you about what is going on at the Naval Academy is what I would like to accomplish in the little bit of time we have together. Dr. Armstrong and I would be more than glad to answer questions.

Of course, we needed to convince people at the Naval Academy to do this study but then for the first classes of 1995, 1996, 1997 and 1998, we did not collect any information regarding their name. We gave them total anonymity and then we asked for volunteer human use in our plebe class (class of 1999) when we collected their data this summer.

This is the first time we have gone public with what our results are, having started to collect our data in May and then in July. October 2 is the annual Board of Visitors meeting at which time the Commandant and the Superintendent will reveal to the press and to the board of visitors what our findings are. We asked the Naval Academy permission to give it to you today before that meeting.

For the class of 1995, we thought, using the best instrument available in the civilian sector, using the EDI-2, we ascertained that in terms of % of potential midshipmen with eating disorders, by class and by sex, what you see is for the class of 1995, 10 % of the women, 1.7 % of the men; the class of 1996, 4.8 % of the women, 2.9 % of the men; the class of 1997, 13.4 % of the women, 4.7 % of the men; the class of 1998, 11.2% of the women, 2 % of the men; and the class of 1999, 5.6 % of the women, 1.9% of the men. What you need to understand is this was the entire brigade in May of 1995 when we collected them at that single point in time, a snapshot view.

And then when the new class came in, we wanted to do baseline assessment of where they were. Seventy-five percent of the women coming in the class of 1999 knew someone with an eating disorder prior to coming to the Naval Academy and 50 % of the men knew someone with an eating disorder prior to coming to the Naval Academy. An interesting item about this particular --

DR. URSANO: So those are in their first year, the class of 1999?

DR. HOLMES: Before it actually started, in the first week of coming to the Academy.

DR. URSANO: And the other four are collected simultaneously so that the class of 1998 actually was the freshman class, the first year class.

DR. HOLMES: Yes, it would have been at the end of their first year, at the end of that one. So you see that marked difference there. So this was as of May, all of them together. The first of 1995 had nothing to gain or to lose. There was quite a concern at the Naval Academy about commissionability should we know who they were, that was why we had total anonymity and there would be no repercussions for them to tell us this information about themselves.

With the class of 1999, to use our military words, we would say this would be a pre-existing condition, if they were diagnosable upon interview.

DR. GLOWA: Do you have a sense for the two individuals that were brought in that were pre-existing?

DR. HOLMES: Upon interview with them, they had what would be called a pre-existing condition, a systematology prior to coming to the Naval Academy. It was exacerbated while they were at the Naval Academy.

DR. GLOWA: Were there any limitations in terms of admission?

DR. HOLMES: No, not to come to one of the academies, however, that would be a question upon separation after one would be commissioned and then you are on active duty and then you have a problem.

To take this down to numbers with male midshipmen, again, one of our difficulties was that there was a perception at the Academy that it was a woman's issue and that they would only let us research the women. We had to convince them that although by % it would be smaller but because we had greater than 85 % of our population being male, that they needed to not be sexist about the research. We wouldn't get the information we wanted because there is an underlying perception on the part of women at the Naval Academy that they are stigmatized or singled out. Therefore, we needed to research the men, too. Also, by absolute numbers, we could end up with more men with an eating disorder or disordered eating, if you would, than women and so what we have here is the information by numbers in the class that we collected the data on

You can see by the numbers in our talking to David Garner, the man that designed the EDI-2, that we have the largest sample ever used, larger than the sample norm with the instrument and so by absolute numbers here with women for the classes, you see the numbers that we have.

DR. GABBAY: Do you think the lower rate is because they had to provide their names?

DR. HOLMES: No.

DR. GABBAY: So it is just a blip.

DR. D. ARMSTRONG: Let me quickly interject. I asked that question of the data and I think there were 10 people in the class of 1999, 10 women that showed up for scoring above the 90th percentile. Five of those gave us their permission to study them further in subsequent years, five did not; so when you compare the two groups, one against the other, they overlap because there is no differences between the groups. I feel very confident that the five people that wanted to remain anonymous are not substantively different than those that are going to allow us to test them, say, next April or May.

DR. URSANO: What did they actually answer on the questionnaire that triggers the 90th? I mean, is this a subscale of the questionnaire? Is it 30 questions?

DR. HOLMES: There are 90 questions in the EDI. We used two of the subscales that are for determining on the interview and then those questions relate to bulimia. There are greater than 10 questions per subscale.

DR. URSANO: And the kind of items, what kind of things are they asking?

DR. HOLMES: I almost brought you an EDI to give you and I can fax one. Do you have an EDI-2?

DR. URSANO: So there are issues about how food is handled. "I have extremely high goals", "I tend to---", did you also look at their weight?

DR. HOLMES: Yes, we had their weight, we had their height.

DR. URSANO: And did these people fall below, did they also meet the weight criteria as well as meeting the scale criteria? In other words, do they show a disturbed weight at one end or the other?

DR. HOLMES: The majority of them would fall into the norm, the expected normal weight.

DR. URSANO: Their BMIs, the average BMI is 22. It is an important distinction because the issue here, I think your phrasing of it is very nice, the distinction between disordered eating and eating disorder.

DR. HOLMES: Right, and at this point we are trying to tell people that with good information about disordered eating, we would like to convince the Academy to go forward to do further analysis by structured interview and then determine more appropriately whether or not we are talking about eating disorders. What we have got going is the idea that we can follow up the class of 1999 at the end of their first year. We can do the entire class again and then identify those that said they would allow themselves to be identified and analyze that, as well with other tools. We would be happy because we can include them in during the --

DR. URSANO: What does the scale predict? What has it been validated against?

DR. HOLMES: The EDI-2?

DR. URSANO: Right. Does it predict future anorexia? Does it predict depression? Does it predict suicide potential or does it just predict what it says? These people have a strange way of looking at food.

DR. HOLMES: Just what it says.

DR. URSANO: So there is also a question about validating the measure against either behaviors or outcomes of military or health relevance.

DR. HOLMES: It has not been used in a military context. We have got the manual with us and they have got the other correlational kind of work that has been done.

DR. MITCHELL: It is usually used as a training scale in outcome research. It has eight subscales in a treatment program.

DR. HOLMES: In some. But it has also been validated with the normalized college students.

DR. URSANO: Have you looked at your subset and grades or performance? Anybody else would be identifying those people that do best, et cetera?

DR. HOLMES: We could do that with those who we normally --

DR. URSANO: That is right, you only have one group with the names.

DR. HOLMES: But we do have grades and performance scores by entire classes for the rest of the brigade but we would not be able to pair one up.

At the Naval Academy, there is a lot of discussion about causes of eating disorders and what we saw with the difference between those in the class of 1999 and 1998, let's say, and what is going on within that, but now you are in this subculture --

DR. URSANO: Excuse me, Betsy but it is very interesting data. Do you know, of those that you have the names of, whether or not they have amenorrhea?

DR. HOLMES: Yes. We asked those questions.

DR. URSANO: And they do or they don't?

DR. HOLMES: They don't.

DR. URSANO: Do you know of a group who do have amenorrhea, what they are scoring on?

DR. D. ARMSTRONG: I have asked that question and I don't have that figure with me.

DR. URSANO: Exercise-related amenorrhea is what I am thinking.

DR. D. ARMSTRONG: From the bone density study, we keep track of, we have 250 women out of brigades so that is nearly 50 %. We know that in the first six months that they are at the Naval Academy that more than half do not menstruate for that six month period. Sometime after six months and during their plebe year, the majority of them will start to normalize, but about 15 % remain with significant menstrual disturbances but that subgroup, that 15 %, is losing bone density at about six % per year in their hip so we are concerned about that. We have asked demographic data for this study, whether or not they have missed their period for a period of six months or longer. The vast majority have not but there is a group there. It doesn't seem to be playing out here. Six months or longer may be too great a time period. Maybe I should shorten it up to three months.

DR. URSANO: You also have got a very small number of people you are looking at.

DR. D. ARMSTRONG: In the brigade we captured 406 women out of 580 and with the incoming plebe class, we got 179.

DR. HOLMES: All of it.

DR. URSANO: Right, but the number that are actual hits on this is a small group.

DR. D. ARMSTRONG: You mean for potentials, yes.

DR. URSANO: So what is the relationship between positive hit on this measure and positive hit on amenorrhea greater than six months of meeting increased risk for bone density? You are looking at, you need several years to collect that population.

DR. D. ARMSTRONG: Exactly, and Garner will tell you that using this instrument (you need to do a follow-up with a clinical interview), it has been his experience that for every 100 women that score above the 90th percentile on the EDI, about 10 % will have a bona fide clinical eating disorder.

DR. URSANO: We just had a presentation this last week from Lars Weisæth, who talked about peace keeping forces and commented about the high rates of amenorrhea in women deployed which is not unusual. Lee Poth chimed in very quickly to say that one finds, of course, decreased androgens as well in men so the question of thinking only about the repression of sex hormones in women may bark us up a wrong tree and the question may be somewhat broader. I don't know what that has to do with bone density but I would sure be interested in what is going on in the men as well in terms of alterations in sex hormones that may have other potential medical complications.

DR. GLOWA: Does bone density recover with good feeding?

DR. D. ARMSTRONG: At this moment, no. As long as they remain with a menstrual disturbance, it looks like about four to six % a year in that subgroup with good feeding will have other biological symptoms. I am not sure that this is a feeding trial. I think this is global stress. I mean, they are under tremendous duress from a number of avenues, particularly during the first year.

DR. GLOWA: I am just curious about the reversibility of it.

DR. D. ARMSTRONG: I don't know yet, we don't know the answer to that question. We do know that women who come into the Academy that have had prior menstrual disturbances and have been placed on birth control pills by their physicians maintain bone density straight across so we have been able to substantiate the literature on that point.

DR. URSANO: I assume we don't know the answer, but an obvious military population to consider, in terms of the Army, is the people that are going to jump out of airplanes. We do have some women that do that even though they don't fly into combat settings. So with amenorrhea in those groups where, in fact, they may have decreased bone density and may specifically be subject to specific military stressors but at increased risk makes for a very interesting population to worry about.

DR. HOLMES: Makes for a very interesting study that Dave Armstrong would like to do.

DR. D. ARMSTRONG: I want to look at female fighter pilots flying off carriers.

DR. URSANO: Except they don't want to jump out of airplanes so they are sedentary.

DR. GLOWA: Do female marathon runners lose bone mass?

DR. D. ARMSTRONG: Yes. If they are amenorrheic.

DR. A. ARMSTRONG: Was there information about other menstrual disturbances? They can have disturbances and have chronic anovulation and not necessarily have sustained amenorrhea and I was wondering if there were questions in the demographics --

DR. D. ARMSTRONG: Okay, we addressed it. We asked the age of menarche (we don't specify it down to the 12.5, or whatever, periods per year) and the length of time. The co-question to that is how many days between your periods to get at that anovulatory, luteal phase defect and then we asked them whether or not they had been amenorrheic for a period of time, six months or longer so that is a yes or no. We are trying to get at that information.

DR. A. ARMSTRONG: The other difficulty is, I would imagine, a large percentage of these women are probably on birth control pills and so they have cycled withdrawal bleeding because of exogenous hormones.

DR. D. ARMSTRONG: Actually, that is not true; it is surprisingly low numbers of women. It is probably less than 10 % of the brigade so it is about 50 women out of the brigade are taking birth control pills which I find surprising.

DR. A. ARMSTRONG: That is. The other question I have is does the type of disordered eating parallel what it does in the general population where you have the greatest number involved in binge eating as opposed to anorectic type behavior?

DR. HOLMES: Yes.

DR. URSANO: Do we have any studies, Jim, (that would probably be in your ballpark) looking at hip fractures of anorexics that have healed over? Has anybody looked at that?

DR. MITCHELL: It is anecdotal but, yes, there are a lot of anecdotal reports with fracture risk, sometimes targeting special populations. For example, ballet dancers are the ones everybody emphasizes but in the anorectics, the reversibility of the bone mineral density problems is still up in the air. In some studies it is not completely reversible and in one study, at least, if you had pubertal onset anorexia, you are going to have permanent growth retardation.

PARTICIPANT: May I ask you a question that is unrelated to some of the questions you have been answering. You said something which was very intriguing to me, and I wonder if you would elaborate briefly. Did I understand you to say that binge eating disorder was not in DSM-IV because there was concern by the managed care lobby, that translated to five million members who had to then be paid for? Because of that concern, it takes me outside the military as a potential five million women with significant data that can't be treated for political reasons. That is my interest. I wonder if you could elaborate a bit on that.

DR. MITCHELL: There actually hasn't been any response on the part of third party payers, but for the committee that was christened to make these decisions, clearly the political agenda was at the forefront of their thinking. There was an excellent article that was written about the development of the BED construct and how decisions were made about it. If you give me your card I will send you a copy of it. It is a fascinating document looking at the way decisions like this are made about the nomenclature. We like to think that they are all very scientific but a lot of times it breaks down to personality and opinion. It is a very interesting article.

DR. GLOWA: Do you happen to know in the animal model of activity in anorexia, alone, whether bone density decreases?

DR. MITCHELL: That is a good question. I don't know if that has been looked at. It may have been but I don't know.

DR. GLOWA: There is an association of stress factors that has been noted and bantered about.

DR. MITCHELL: Yes, I don't know. That would be interesting to look at.

DR. HOLMES: If we can move quickly through this and get back to our questions, in terms of the Naval Academy and the military environment that we are in, there has been a lot of discussion about the cause of eating disorders. There was some friction amongst people about pathology versus the sociocultural things that are going on. So, we have been looking at the individual predisposition in terms of what are the people like before they come to the Academy. We are examining perfectionistic attitude and proper behavior and dieting history and the underlying feelings of inadequacy and their model of self-emulation that goes with women.

And then having a desire for control but within the context of our society and of the Naval Academy, we are thinking about society in the military and its possible relationship with depression and how the media takes a big part of that context. What we had is midshipmen coming in with non-critical thinking, inadequacy in their relationships and community norms in the society outside the walls of the Naval Academy about fitness and society's ideal of women. And then you put people into the Naval Academy and look at the possible risk factors. The weight conscious thoughts that many of them are involved in, the attitudes towards women of the majority of men being at the Naval Academy, the male majority, female minority is quite a significant factor at the Academy. There is also the myth of the freshmen 15 pound expected weight gain.

What we see happening during plebe summer, in terms of eating changes and new challenges is that they have this exercise program as people come in for their summer training. We then we move away from that to an academic environment in which we have a more sedentary group of people who have an illusion in their mind that they are quite athletic even though only 50 % of the women and 35 % of the men are involved in varsity athletics.

What we see happening is that they don't reach that level of performance and amount of exercise that they have during the plebe summer. So during the plebe summer, they may come in fit, they may lose weight while they are there and they want to keep that weight off. But what they see is a slight weight gain during the academic year (probably not as much as the weight gain of 15 pounds that their civilian friends are talking to them about), but they do have that fluctuation. Also, being in uniform and the uniforms being more oriented toward the male physique than the female physique. The culture of the Naval Academy is quite biased and they treat the younger midshipmen with a lot of abuse in terms of telling them that, "we don't want you to get fat, you won't get fat" and so they are constantly ingrainning them with that image.

Also, there was one other change this year at the Naval Academy. What used to happen during mealtime was that you would be, quote, unquote, rated while you were eating and you wouldn't be really permitted to eat your meal. If you did eat anything, you were eating exceptionally fast in an exceptionally short period of time. We made a change in the Academy that said that you were obligated to give the plebes time to eat, that you were not allowed to rate them during the mealtime any more, hoping that that would affect a change in the future. That and something else I am going to tell you about in a minute.

What are we trying to prevent at the Naval Academy? Yes, we want to get some information about where we are at, but the whole goal of the Naval Academy is to change the situation in terms of the components of disordered eating. We don't want people to have the fear of being fat and overweight (or perceived as overweight), negative body images that lead to weight cycling, related to sports or not. Also, some of our people come in and want to exercise six hours a day which they can't do in the academic schedule they have; we don't want them to participate in unhealthy weight practices.

This is what we tell them. We don't go into a lot of detail about the exact diagnoses out of DSM-IV. We are more generic than the precise nature of that. Unfortunately, we had some people that had learned bingeing and purging behavior from other people there in terms of how to do that as a way to control weight and we didn't want to be that precise. We didn't know what the behavior was exactly.

Our goal was to do some primary prevention with the incoming class. Knowing by percentage what their potential was to have an eating disorder, we decided that we would do primary prevention with them. We educated all 1,100 plebes about disordered eating and what they could do to try to defend against developing bad habits while they were at the Naval Academy.

We know that the primary prevention modes are notoriously poor methods of trying to change behavior but, nevertheless, we thought we should make it the old college try; we will follow up the end of their plebe year. The problem may be that two hours with them during the course of the summer can't really equate to the amount of time spent in Bancroft Hall around the cultural norm to behave in a way that is detrimental to their well-being.

The secondary prevention model we are using is a new program called the Hero Education Program. An analogy to that is peer counseling or peer education that would be used in a civilian high school model. We are educating a representative person from each class in each company about eating disorders and helping them to identify those that may have a problem, so that they can refer them for a tertiary prevention program. I have a model of an educational packet, if you would like, for all of the faculty staff in administration at the Naval Academy that outlines to them exactly what eating disorders are, how to help someone with an eating disorder, what an educator can do or should not do, what a man can do to help and give them other resources so that they become educated about eating disorders. Then we are consulting with all the athletic coaches in groups, using the NCAA model of dealing with eating disorders and we are sending out brochures to all the midshipmen. We have developed two, one of which is what do you do to help a friend with an eating disorder. We have sent this and some of our primary prevention material up to the cadet counseling center at West Point so they are going to integrate that in their program.

In terms of tertiary prevention, we have identified a male health provider to be the person to have all the referrals, much like in the addiction and counseling center model but we had two men staffing that counseling center who didn't feel equipped to deal with the topic of eating disorders. They thought it was primarily a women's issue so we have identified a woman to handle the formal diagnosis of eating disorders, to work with our medical providers, and to design an individual and group treatment that has not been done up to this year at the Naval Academy.

Health issues have, in our mind, a social, cultural and political context and if we ignore the context, we fail to solve the problem. We are in the context of the Naval Academy which is contributing to the problem and so we are trying to get people at the Naval Academy to understand what their contributions are to the problem which doesn't make us exactly the most popular people in town.

Our primary prevention model has been to identify, eliminate or reduce the personal, social and cultural factors contributing to the development of eating disorders and, at the Naval Academy, a much more palatable word, disordered eating, to develop individuals' social strengths in contrast to vulnerabilities to prevent the problem from developing beyond the level that we already know it to be, particularly with the incoming class of 1999. Another goal is making treatment acceptable to people that had not been acceptable at the Naval Academy for fear that it would mean that you would be separated.

We have changed what is called the Sea Storm, that is, the rules and regulations say now that if you are identified with an eating disorder, it does not automatically mean that you will be separated from the service of the Academy.

We want to help young people to learn, to think critically, to manage the context they are in and not let the context manage them. This is contrary to what military thinking is in terms of the military academy. Our goal is to help midshipmen to build a community around diversity rather than one single idea about what a midshipman should be, and have women accept themselves and be women.

So what you have got is a brief presentation on the global picture of what we are trying to do, at the Naval Academy with the intention of following up on our research, both at the Naval Academy and perhaps at the other academies.

DR. GABBAY: I will start the questions. I guess it is probably difficult to answer this until the studies you want to do in the future are done and we can say with some certainty whether the prevalence of eating disorders in the military is less than, equal to or higher than that in the general population. Based on what both of you have said, however, it seems like we do know that, number one, in societies where there is an emphasis on thinness, you get a higher rate of eating disorders. What I am wondering is, how might that translate in the military where not only is there this context that you described at the Naval Academy, but once they are commissioned. As I understand it, in the military there are fairly strict weight standards imposed so it is not something that can just be ignored. Might we expect that to increase?

Let's assume that if there is an individual predisposition (I like that, that way of looking at it) and let's say that the prevalence of that predisposition is equivalent in the general population and in the military, might we assume that the threshold might be different, that we might push people into the eating disorder more as a result of these weight standards?

DR. HOLMES: We are making some pretty presumptive conclusions at the Naval Academy because we haven't done our research to validate our anecdotal information. However, by anecdotal information we believe that there is a self-selection screening factor for, let's say, people coming to a military academy as opposed to a civilian institution. Then you add on top of that the predisposition, the drive to thinness, both in the civilian culture that they bring and in the military culture that they exist in. You put them in an environment in which they are constantly scrutinized, inspected every day, wearing a uniform where the male norm is what is the expected norm for women as well and we have people who buy that internalized method. Then we have women who, after internalizing that, think there is something wrong with them. Even when they are victimized by the institution, they still think it is them, that they are not good enough for not being thin enough.

We think that there is some repercussion to that but even when we followed up people post-commissioning and looking at all the statistics in the Navy on how many women were separated from active duty by either a medical board for an eating disorder or separated by an administrative separation, not for a medical problem. We are not finding the numbers. They are not there.

Now, is it situational? Is it only while they are at an academy? Do they outgrow it? We don't know. Are they going underground and not coming forward? When they have, we have a case of a 1993 graduate of the Naval Academy that had an eating disorder while she was at the Naval Academy. It seemed to have started with pressure from a coach. Her cheerleading coach told her that she couldn't lose the weight and then she was also treated abusively at the Naval Academy by her peers. Not thinking that she was a victim at all, she graduated from the Naval Academy, subsequently sought treatment, and was told that there would be treatment when there was none. On top of this she was given a medical board her for having an eating disorder which the PEB wouldn't accept because they said that, "we don't accept eating disorders as a medical diagnosis." So then they had to re-do a board on her to administratively separate her for a personality disorder.

DR. GLOWA: Interesting point that they won't accept an eating disorder as a medical diagnosis. Is there a basis for excluding individuals for acceptance into the Academy based on prior diagnosis of an eating disorder?

DR. HOLMES: They are not asking that question explicitly. People are not coming forward and saying, "I have been diagnosed with an eating disorder."

DR. GLOWA: In your search for diversity, do you let any other DSM-IV-diagnosed individuals into the Academy?

DR. HOLMES: I think that the only question that they are being asked at all is the generic kind of, "have you ever been treated for depression?"

DR. URSANO: The rules and regs, I am sure, at the Academy, would not allow it if it was diagnosed and present but the real question is, how is it screened for? It is screened for by a physical exam and meeting with the physician who asks, "have you ever had any problems that I should know about?"

DR. GLOWA: Drug abuse falls in that category.

DR. HOLMES: And the appropriate answer is "no." If it should become apparent later on, then the question is, is this a fraudulent enlistment? Well, no, they are not really enlisted because they don't fall into a category. You are only active duty if we want you to be and you are not active duty if we don't want you to be. Most of the time we don't want you to be if you have a medical problem because we are not going to cover the medical expense for you. That is another problem, as an aside, we have gotten into this in the pregnancy policy. The military does not have a way of paying for medical care for someone leaving any of the academies for a medical reason, but the Admiral we have wants to offer medical care for pregnancy if someone should decide to leave to deliver.

DR. URSANO: There is no COBRA (Consolidated Omnibus Budget Reconciliation Act) law for active duty individuals that allows you to maintain medical care for 18 months after discharge?

DR. HOLMES: They are not discharged because they are not on active duty. They are separated or let go.

DR. URSANO: I am curious about your comments about really we don't have the numbers in terms of diagnoses when we actually look at the number of people who are discharged. Maybe the question is being framed in the wrong direction. Maybe the question of onset conditions and the outcome needs to not be looking at the question of the development of weight loss but, rather, "how many of our females on active duty have episodes of amenorrhea?"

Also, "is there a particular constellation of episodic events or ongoing events that required or mandated exercise along with episodic high levels of stress and with episodic amenorrhea that in fact puts women in the military at greater risk and that that is a forme fruste of eating disorder without the eating component, but with the other elements that have to do with the physiologic cost involved in this kind of constellation?"

So, the outcome measure we might want to wonder about is, how many episodes of amenorrhea, for what duration occur in active duty women and what is the comparator to another population involved in a less physically demanding, high stress, and frequent alterations of sleep patterns in deployable situations. Maybe there is a hidden cost in that. If nowhere else, in terms of bone density over a lifetime.

DR. A. ARMSTRONG: I am really excited about your presentation. Dr. Foulks and I are interested in talking to you and Dr. Armstrong about the proposal we are submitting to the Women's Health Program to look at eating disorder behavior among active duty women in a weight control program versus active duty women who fit the weight criteria. Because my interest is obstetrics and gynecology, we are going to correlate that with menstrual history and also demographic information about what is their MOS (Military Occupational Specialty), what is their job description, et cetera, and so we are interested in talking with you in terms of developing that proposal.

DR. HOLMES: Great.

DR. FOULKS: Do you know anyone that has looked into weight management programs in each service and has taken a look at disordered eating behavior of people that are in those programs?

DR. HOLMES: I could only speak to the issue of the Navy, and to the issue of the Navy, I don't even know if we have one inpatient weight control program left. I don't think that we do.

DR. A. ARMSTRONG: They used to have, I think it was a level three. In researching this, we looked for the statistics on a weight control program. Well, they don't exist. It is at the commander's discretion, the numbers of people that are in the program and whether or not they are discharged. They have no idea about the success rate of the weight control program. We were going to do this on a tri-service basis because there are service differences in terms of how they treat these women because there is no inpatient program currently. The one they used to have was in the Navy. The Air Force is different in that they don't have scheduled weighings; they have random weighings. In the Navy and the Army, one knows ahead of time, perhaps several months ahead of time, when one will be weighed in. People who ordinarily would engage in this sort of behavior, if they have an identified date in which they have to come into standard, may demonstrate disordered behavior around these events. We are hoping to design a questionnaire that will capture that information as well as using an EDI-2.

DR. HOLMES: To speak to that issue, at the Naval Academy, they are weighed in every week so when you talk about not just sports, seasonal situation things, it is an, and some people who don't understand eating disorders purposely want midshipmen to weigh in every week thinking that will help them not to have an eating disorder, not understanding that that is a significant contribution to the behavior.

DR. URSANO: Why are they weighed in every week?

DR. FOULKS: Everyone is weighed in every week?

DR. D. ARMSTRONG: During plebe summer.

DR. HOLMES: During plebe summer they are but after that, a company can choose to weigh people. It is by discretion of company officer. In some athletic teams, they weigh in every week but there are companies that weigh in every week thinking that is helping.

DR. URSANO: That is when plebe summer has developed to look for and monitor weight loss that becomes too severe.

DR. HOLMES: But after that, it becomes an issue of appearance in your uniform.

DR. GLOWA: When they ran weekly, was it pretty much the same day every week?

DR. D. ARMSTRONG: Not necessarily.

DR. GLOWA: Not necessarily the same nor in the same gear. If it exacerbates the disorder and it occurred regularly, you could see a pattern within the week, there is profound implications for that. You could bring it under control then. If you are doing it randomly, then it --

DR. D. ARMSTRONG: We have something, particularly towards plebe summer, saying you have got to weigh in on the same day of the week, in the same gear, same time of day.

DR. GLOWA: And if that is up to the individual, they can raise the incidence as they approach, then it would be viewed that you have experimental control over that behavior.

DR. D. ARMSTRONG: Of course, that day is not available. It may be written down but I am not sure it is, or if it is written down, the records are not kept where you can get hold of them. I mean, at the Academy you have 36 companies, you have 4,600 people. And so there is a whole potpourri of management styles. You think of the military as being consistent, well, the thing that strikes you about the Naval Academy is the inconsistency between companies and how they are managed. I mean, I saw one female the other day (and she is relatively new) but if you don't meet the PRT, if you fail the PRT, you are in control.

DR. URSANO: What is PRT?

DR. HOLMES: Physical Readiness Test.

DR. D. ARMSTRONG: Physical Readiness Test. If you fail that, all kinds of privileges are removed from you can't use the ward room, you can't go to this place, you have got to be in your room a certain time, and in this particular company, it is clear that the people who are failing the most are the women. That is just one company out of 36. I don't know what the other ones are doing.

DR. GABBAY: Jim, in a western population, are there socioeconomic differences in terms of risk?

DR. MITCHELL: They seem to be disappearing. There used to be some studies, particularly out of England suggesting that anorexia was more common in high socioeconomic strata but more recent studies suggest they really span all groups. Still less common in minorities but again if you look at high socioeconomic minorities, they are more common.

DR. HOLMES: We bring up in our primary prevention efforts that in those cultures in the world in which there is a drive to thinness, there are eating disorders as they drive to thinness as a body ideal. In those cultures where there is no drive to thinness as a body ideal, there are not any eating disorders. In those cultures where there is a drive to thinness, as the body ideal and eating disorders, there is double the rate of depression. In those cultures, again, with no drive to thinness, no eating disorders, no correlation with depression. It is interesting all the links that when you try to present to people to get them to question the drive to thinness as the body ideal. And they already come into the military services so predisposed to have that as a body ideal and it is so detrimental to women. When you become a minority in a social system where you at least, half of the population before you got into the military system. It is a very significant contribution, I think, to developing eating disorders at the Naval Academy.

PARTICIPANT: For the young women who develop BED, does this turn into a lifetime problem? Do they grow out of it in some way?

DR. MITCHELL: We don't know much about the longitudinal course of this problem. We know that a lot of people with BEM, for example, never seek treatment and recover on their own but BED it is less clear. In the cross-sectional studies, it is the more prevalent, so it doesn't appear to be going away, at least in huge numbers. It seems to be sort of a plodding, ongoing kind of problem.

One thing I did mention that I think is interesting in terms of age of onset, is that in some of the studies that have been done now, if you cluster analyze clinical variables, you find that there are two subgroups of people who eventually are diagnosed as BED. One are people who come from families who are heavily loaded for obesity, where people are starting to gain weight in early adolescence or dieting, restrictively eating and start having binge eating in that context. And those people clearly are having weight problems before they are binge eating.

The other group, and it may account for as many as 40 %, are not premorbidly overweight and are not dieting when they start binge eating. They just seem to have chaotic eating patterns that develop at least five or six years before they ever gain excessive weight. That second group is the group that tends to have the high rates of psychopathology so that there may be different treatments for different people.

The treatment literature on BED is very limited so far. There are very few controlled treatment trials. There are two showing that cognitive behavioral therapy is effective in reducing binge eating. One study has a one-year follow-up now suggesting that psychotherapy following behavioral therapy is effective. A couple of drug studies using serotonin re-uptake inhibitors suggests that they will suppress binge eating, but they rarely eliminate it.

The thing that has been, I think, the most important question in BED treatment is if we take these people who are overweight and binge eating and we teach them not to binge eat, are they going to be able to control their weight better? And, if that were the case, that would be phenomenally important because we know how poorly we do with overweight people in general. So far, that is not the case, even in people who are successful to get their binge eating under control, it doesn't appear that their weight status changes remarkably and that has been really disappointing so far.

DR. GLOWA: One of the parallels you were developing through your talk was between alcoholism and eating disorders to some extent, at least I see some parallels there, particularly sort of the unit intake per time incident. Do people talk about alcoholism as a subform of bulimia or vice versa?

DR. MITCHELL: A lot of people have attempted to equate the conditions and some people in the chemical dependency side have tried to see eating disorders as another form of substance abuse. I think there are important differences, though, in particular theoretical differences in treatment approaches, particularly in a place like Minnesota where the 12 step model is so prevalent. I think the data suggests that kind of model is not a useful model for eating disorders. But there are certain behavior similarities. The comorbidity is rather striking.

There seem to be a couple of patterns. There is a subgroup of bulimic patients who will engage in alternative behaviors. One day they will binge, the next day they will drink. There is another group who seem to be just inhibited by alcohol and they are more likely to binge eat when they are intoxicated.

DR. GABBAY: I think there are some people hovering so we need to vacate. By the way, you are welcome to invite anyone who wants to join us in the cafeteria for an early lunch.